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CONTENTS

	Page
EDITORIALS	
Highlights from the House of Delegates	281
Medical Care of the Indigent	283
Texas Health Council Progresses	284
Current Editorial Comment	
The Early Detection of Schizophrenia	285
ORIGINAL ARTICLES	
Intracranial Complications of Otogenic and Rhinogenic Disease — *Charles I. Johnson*	287
Acute Infectious Maxillary Sinusitis — *Hamlet I. Davis*	292
Chronic Suppurative Otitis Media and Mastoiditis; Management — *J. Dudley Singleton*	295
Foreign Bodies in Air and Food Passages; Observations on Series of 85 Cases — *Oliver W. Suehs*	298
Practical Aids for the Refractionist — *Maxwell Thomas*	304
Treatment of Myocardial Infarction — *James Kindred Norman*	308
Dissecting Aneurysms of the Aorta; a Ten Year Study — *J. Alfred Rider, John W. Chriss, and George R. Herrmann*	311
Modern Concepts of Leprosy — *James A. Doull*	315
Anorectal Disease in General Practice — *T. Wade Hedrick*	319
CASE REPORTS	
Far Advanced Pelvic Carcinoma Treated by Pelvic Exenteration; Report of a Case Complicated by Lower Nephron Nephrosis — *W. S. Lorimer, Jr., E. E. Muirhead, and T. U. Taylor, II*	322
Submucous Lipoma of Ileocecal Valve; Case Report — *John F. Thomas*	325
NEWS	
Coming Meetings and Clinics	327
Texas Society for Mental Health	329
LIBRARY SECTION	
Package Service	330
Motion Picture Film Library	330
New Motion Pictures for the Film Library	331
Book Notices	333
ORGANIZATION SECTION	
American Medical Association Annual Session Program in JAMA	336
County Societies	336
AUXILIARY SECTION	
National Auxiliary to Meet	339
Auxiliary News	339
DEATHS	340

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HIGHLIGHTS FROM THE HOUSE OF DELEGATES

Details of the recent annual session of the State Medical Association, including the complete transactions of the House of Delegates, will be carried as usual in the June issue of the JOURNAL. However, for those who were not among the 2,030 registered at the session and for those who were primarily concerned with the scientific programs and other aspects of the meeting, some of the highlights from the House of Delegates will be mentioned now.

The physicians who served in the House of Delegates in Fort Worth from April 30 through May 4 worked hard and earnestly with three objectives apparently in mind: (1) to make the State Medical Association of Texas, its committees, its activities, and its members more effective; (2) to build strong bulwarks against interference by the federal government in matters of health and medical care; and (3) to give better service to the people of Texas. These three objectives, although distinct entities, are so interrelated that few of the specific actions taken by the House can be assigned just to one category; in most instances the important decisions related to at least two and sometimes all three of the objectives.

One action, as yet incomplete since amendments to the Constitution must be held over for a year before they can be finally voted, was to delete the word "white" from Section 3, Article II of the Constitution. This action, which was overwhelmingly approved and should readily receive sufficient support to become effective next year, paves the way for membership in the State Medical Association of qualified Negro physicians. Negroes may thus benefit from the scientific program of the State Association and, through it, of the American Medical Association. The Association thereby will broaden its base, serve more people, and speak with a more representative voice.

Two recommendations from the Committee on Public Relations designed to provide for better official cooperation between the medical profession and laymen were adopted. A Public Grievance Committee to receive complaints about individual physicians and to help work out satisfactory solutions for disagreements between physicians and their patients was authorized, and the development of a code of coopera-

tion between the medical profession, hospitals, press, and radio was decided upon.

The membership of Negroes, the grievance committee, and the code of cooperation obviously relate to an attempt to relieve situations which have irritated the proponents of federalized medicine. Several resolutions and recommendations dealing specifically with federal encroachment in the practice of medicine also received the consideration of the House. Another step aimed at making such encroachment less likely was the adoption of a resolution to be presented before the House of Delegates of the American Medical Association recommending that boards of specialization require two years of general practice somewhere in the United States or one year of such practice in a town of less than 5,000 population. Such a requirement would give the specialist good basic training and would also assure a greater distribution of "family doctors" in areas where they are most needed.

In financial matters the House of Delegates took several important steps. It was agreed that county medical societies should undertake to collect the annual dues of $25 for membership in the American Medical Association from all society members except those financially unable to pay. Another resolution to be introduced before the American Medical Association House of Delegates requests that subscription to *The Journal* of the A.M.A. be covered by the $25 dues. The By-Laws of the State Association were amended to allow the Medical Defense Fund, which has been growing steadily over the years, to be absorbed in the General Fund, with medical defense expenses to be paid from special allocations for that purpose by the Board of Trustees. It was pointed out that this move not only would make possible the continuation of the fine work which the Council on Medical Defense does but also would make available for other useful purposes the money which has heretofore been earmarked entirely for medical defense. One purpose the proponents of the amendment had in mind was the financing of the new headquarters and library building of the Association. Plans for the structure were submitted to the Board of Trustees and were on display for members of the House to see. Since an invitation from Houston physicians to move the Association library to that city as a part of the combined medical libraries to be housed in the Texas Medical Center was withdrawn before it reached the floor of the House, it appears that plans for the building in Austin can go forward rapidly and that construction can begin as soon as working drawings are prepared and contracts are let.

Upon the recommendation of the Council on Scientific Work, action was taken to condense the annual session program into the period from Sunday through Wednesday, thus eliminating one day, in the hope that more physicians might be able to stay through the entire meeting. One revision in the program which will make possible the new schedule is the elimination of all guest speakers except one or two on non-scientific subjects. All scientific addresses will be by Texas physicians who are qualified and should be given an opportunity to present their research and clinical contributions.

A number of members of the Association were honored by their fellows during the 1950 annual session. Dr. Jim Camp of Pecos was elected General Practitioner of the Year; Drs. C. C. Cody, Jr. of Houston, Joe Gilbert of Austin, and W. H. Moursund of Houston, who were nominated last year for membership emeritus in the Association, were finally elected to that status; and Drs. Felix P. Miller of El Paso and L. H. Reeves of Fort Worth were nominated to membership emeritus.

Dr. Allen T. Stewart of Lubbock was named president-elect for the coming year, during which time Dr. William M. Gambrell of Austin will serve as president. Dr. Hall Shannon of Dallas was named vice-president and Dr. T. H. Thomason of Fort Worth was renamed treasurer. Dr. Harold Williams of Austin of-

fered his resignation as secretary, and the Trustees requested the House to leave the position vacant until they could consider the situation and name a successor. Meanwhile, Philip R. Overton of Austin, general attorney for the Association, will supervise activities in the central office. Dr. R. B. Homan of El Paso was reelected speaker of the House of Delegates, and Dr. G. V. Brindley of Temple, retiring president, was named to the Board of Trustees to succeed Dr. J. B. McKnight of San Angelo, whose term expired and who was ineligible to succeed himself.

Decision was made to hold the 1951 annual session in Galveston and the 1952 session in Dallas.

Members of the Association and Woman's Auxiliary, which met concurrently, technical exhibitors, guests, and visitors generally considered the 1950 annual session a success. Attention of readers of this JOURNAL is directed again to the June issue, which will carry details of the Association meeting, and to the July issue, which will report the meeting of the Woman's Auxiliary. It is important that every physician and every physician's wife be acquainted with the decisions made and the actions taken at the Fort Worth session so that they may be better members of their organizations and better representatives of the medical profession as they meet the public at large.

MEDICAL CARE OF THE INDIGENT

A number of constructive activities aimed at providing the people of Texas with better medical and health care and at acquainting them with what the medical profession is doing to help achieve such care have been undertaken by the State Medical Association in the past several months. The Council on Medical Economics, recognizing that a knowledge of current conditions is essential before a sound plan can be formulated to correct faults which may exist, almost a year ago decided to survey the state to ascertain how satisfactorily the medically indigent are being served.

Questionnaires on indigent medical care were sent to each county medical society in Texas and to 700 city and county health officers, the latter in cooperation with the Texas State Department of Health. Provision was made to incorporate in the replies the activities and opinions of physicians, hospital staffs, governmental units, voluntary health agencies, clubs, newspapers, and private citizens. A good response was obtained, and a compilation of the replies was made January 15 so that a preliminary report could be made to the Executive Council of the Association at its January meeting and to the House of Delegates at its meeting in Fort Worth. Additional questionnaires covering the same type of information are being sent to county judges and to county commissioners' courts in the hope that the data finally assembled will be as complete and as representative of the communities concerned as possible.

Certainly it is too soon to draw definite conclusions about the status of indigent medical care as reflected in the survey, yet it appears from preliminary reports that in Texas indigent medical care is provided on a fairly satisfactory basis, using as the standard of each community the private practice available there. Indications are that in most instances indigent medical care is provided entirely by private practitioners with little or no assistance from local governmental or voluntary agencies and that frequently the physicians must provide hospitalization as well as medical service. The picture may be somewhat different in metropolitan areas in which free clinics are available, and during 1950 the Council plans to make surveys in several such areas in the state. An example of what may be found in the cities, however, is reflected in the remarks of an administrator of one of the larger city-county hospital systems. He stated that he operated the hospital system on a budget of $1,500,000 per annum and that the time contributed by physicians for in-patient and out-

patient care at a conservative fee would represent at least $1,750,000 per annum.

With the preliminary data in mind, the Council on Medical Economics recommended to the House of Delegates that the State Medical Association lend its aid to any community which wishes to study its medical needs toward the end of developing adequate medical care for the entire population and that the Association encourage local communities to assume their responsibilities for the care of the indigent and the medically indigent. The Council also recommended that the Association encourage its component county medical societies to furnish the community leadership necessary for developing adequate public health facilities and medical care and that individual physicians assume the responsibility of supplying medical care to the indigent and medically indigent, but that they not be asked to take the full financial load of providing hospitals, hospitalization, and drugs as well as medical care. These recommendations were adopted by the House.

The survey of indigent medical care which the Council on Medical Economics has undertaken promises to be of invaluable assistance to communities and local governments as well as to physicians and hospital staffs in developing plans for better medical care. It may thus be pointed to as an active step toward the realization of the sort of health program which the American Medical Association has advocated and which its opponents have scorned as merely a "paper program." Furthermore, it should be realized that one reason citizens of this country are willing to consider a scheme of compulsory health insurance is to assure adequate medical care for persons unable to pay for care or unwilling to budget for voluntary prepaid medical care. If this survey shows—as it appears now to show—that most of the indigent and medically indigent of Texas are receiving satisfactory medical care and that the local communities can provide such care where it does not already exist (as they have provided other community projects such as schools, churches, and roads), there should be less interest among the people of this state in handing their health problems to the federal government.

TEXAS HEALTH COUNCIL PROGRESSES

The Texas Health Council, the positive answer which the Committee on Public Relations of the State Medical Association has given to the question of what should be done to furnish adequate medical care at a cost within the means of all, is fast moving from the nebulous to the concrete.

An office has been set up at 611 Baptist Building, Dallas, with a full-time, independent staff to carry out the program of the council.

The council was never intended to be the sole project of the medical and allied professions. From the first it has had the active support of leaders from every walk of life. Industrialists, dentists, insurance men, doctors, bankers, oil men, medical service and hospital people, pharmacists, farmers, and cattlemen have united to help others help themselves to better health. The Texas Health Council includes on its board of directors a lawyer and corporation executive, a doctor, an insurance executive, a dentist, and a banker. This broad leadership has so inspired the general public that requests are pouring in from lay citizens for councils at the local level. The program and its objectives have received the commendation of key associations and enjoy endorsements of prestige.

The scope of Texas Health Council activities is broad indeed, and its working out will involve a multiplicity of detail. Briefly stated, its objectives are, in general:

1. To help existing agencies in correlating their programs with those of similar groups in other areas.

2. To stimulate interest in and assist in organizing community health councils where none now exist.

3. To serve as a clearing house for information on health services and as a central bureau

for cooperation between existing and newly-organized health councils.

4. To establish health information centers to disseminate information on available health services and facilities.

Specific activities have been outlined for state and local projects. Plans have been made to conduct statewide surveys on a local level to determine particular needs. District organization responsibilities are being placed, leaving the way clear to move on to the county level organizational work where definite activities can be carried out to assist already existing agencies, eliminate duplication of effort, and initiate projects to cover services not now rendered.

Such a dynamic approach to the problem of health care, its distribution and availability, cannot fail in its purposes. This program merits the cooperation and active participation of every local medical society in the state. In a nation dedicated to the principles of free enterprise, in a state which exemplifies these principles, the Texas Health Council may well set a pattern to be followed throughout the country.

CURRENT EDITORIAL COMMENT

THE EARLY DETECTION OF SCHIZOPHRENIA

Approximately 20 per cent of the hospital beds in America are occupied by patients suffering from one of our leading public health problems, schizophrenia. Practically all such persons are seen during the formative stages of their illness by the pediatrician, general practitioner, or internist; thus, upon these physicians' shoulders rests the responsibility for the first detection of either schizoid tendencies or psychotic tendencies of the schizophrenic type.

The origin of schizophrenia is speculative; however, unsatisfactory adaptation to environmental demands or to difficult emotional situations during childhood, adolescence, and early adult life frequently precipitates the illness in persons who might otherwise have remained well. Treatment is difficult but often successful if undertaken during the first year of illness. Thus, prevention becomes the physician's paramount responsibility, while detection and early treatment are of secondary importance.

The illness may appear at any age from 6 years to senescence. Children with early symptoms are usually fearful, shy, and backward, with little initiative in the group and are spectators rather than participants in group activities. Many of them are judged by the teacher or parent to be excessively good because they are too shy to form emotional contacts with others and too fearful to show aggression against adult-made rules. Some of them develop obsessive ideas and rituals to accompany activities such as dressing and eating. Although this type child is in urgent need of a child psychiatrist's care, he is not as likely to be referred as his more nearly normal colleague, also in need of psychiatric care, who is aggressive and boisterous.

Preschizophrenic danger signals in the adolescent child consist of oddities of behavior such as excessive shyness, failure to form social contacts with persons of his own and the opposite sex, and failure to dress according to the current modes of his own age group. He often is unable to break away from the guidance of his parents, particularly the one of the opposite sex, and increasingly depends upon them for love, affection, recreation, and other types of emotional activity.

Many adolescent children of this type develop interests in abstract philosophic works or political or religious ideologies foreign to their upbringing and pursue avidly such activities to the exclusion of more normal pastimes such as dating, music, interest in theatrical and

This department of the JOURNAL *presents editorial comments on current items pertaining to the science, art, and practice of medicine, contributed by members of the State Medical Association and scientists closely associated with the medical profession of Texas. Invitation is hereby extended to any member of the State Medical Association of Texas to submit such discussions for this department. The discussions should not be more than 500 words in length.*

athletic activities, and other creative pursuits common to their particular social group. They are often looked upon as brilliant but queer. A great deal of their brilliance is affected and pseudoprofound; they are often given to long abstruse phrases, frequent allusion to recently acquired literary knowledge, and other characteristics different from those of the ordinary adolescent. Referral for proper psychiatric therapy at this time can often prevent a severe psychiatric disturbance.

The adult with prodromal signs is usually seclusive, withdrawn, and unable to form emotional ties or develop interests in persons or events. He, too, may exhibit interest in the bizarre and often develops odd ideas or becomes a chronic dissenter. The agitated person, the person who is paranoid and suspicious, the permanent malcontent—all offer fertile ground for the development of schizophrenia. People in any of these classifications who begin to show difficulties in their thinking which make their behavior seem unusual are in the first phases of a psychosis.

Perhaps the outstanding symptom which distinguishes these patients is the interpretation of events in the light of their own opinions and their incapability of accepting evidence proving the incorrectness of their assumptions. They often become litigious and quarrelsome and have trouble fitting into their organizations, doing their work, and adjusting to family relationships. The chronic trouble maker, the chronic malcontent, the suspicious person, or the person chronically "agin" everything, however, will present more problems in diagnosis and is likely to escape detection unless the physician and family seek a logical explanation for his illness. In a few instances the onset may be acute with confusion and hallucinatory and delusional phenomena. Little difficulty in diagnosis is presented because of the sudden change in the patient's behavior, and he will be referred to the hospital.

Just a word about treatment can be included here. In the preventive stage environmental manipulation and individual psychotherapy, aimed at simplification and stabilization of the patient's emotional relationships, can be used. Once the psychosis is fully developed, "drastic" therapy, preferably the so-called insulin coma and perhaps electroshock therapy, should be added. If such treatment is instituted early and managed properly by the specialist, it can often produce gratifying results.

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CORRECTION

In the article entitled "Wilms' Tumor" by Dr. John M. Pace, Dallas, which appeared in the April, 1950, issue of the JOURNAL, the first sentence of the second paragraph under "Comment" (page 256) should read: "The tumor is extremely radiosensitive—a fact of considerable importance in considering the operability of these tumors."

Women More Tearful Than Men

Women between the ages of 16 and 29 years normally have almost twice the volume of tears which men of the same age exhibit, two Rochester, Minn., ophthalmologists have indicated. A report by Drs. John W. Henderson and Wendell A. Prough of their examinations of the eyes of 114 males and 117 females appears in the February issue of *Archives of Ophthalmology.*

SCHOOL ABSENCES FOR MEDICAL CAUSES

The common cold was found to be the largest single cause of school absence in a study of the attendance habits of 7,700 California elementary school children. The study, sponsored by the State Departments of Education and Public Health in cooperation with local educational and health authorities and the Metropolitan Life Insurance Company, showed that medical causes accounted for 81 per cent of all absences and for 87 per cent of the days lost.

Colds accounted for more than one-third of the total absences from all causes, and respiratory diseases as a whole were responsible for nearly half of the absences. Digestive upsets, chiefly of minor character, ranked second. The absence rate was slightly higher for girls than for boys, particularly in the upper grades and for medical reasons.

Emotions as Cause of Illness

Writing in the December issue of *Archives of Dermatology and Syphilology,* Dr. O. Spurgeon English of the Department of Psychiatry, Temple University School of Medicine, Philadelphia, lists eight common emotions which are prone to be causes of illness. They are need for love, approval, and recognition; anxiety (fear and worry); hostility; inferiority feelings; "ambivalence" (mixed feeling of love and hate); guilt; ambition (competition); and envy.

ORIGINAL ARTICLES

INTRACRANIAL COMPLICATIONS OF OTOGENIC AND RHINOGENIC DISEASE

CHARLES I. JOHNSON, M.D., Boston, Massachusetts

AT the Massachusetts Eye and Ear Infirmary in Boston, I have the privilege of close association with the Massachusetts General Hospital and the advantage of being able to consult freely with its neuromedical and neurosurgical services. When an otogenic or rhinogenic complication can best be handled surgically by way of the mastoid or sinus, I treat the patient without benefit of neurosurgery. Often at operation a direct lead is found from the mastoid or frontal sinus through a necrotic spot of dura or an area of granulation into the subdural space, the subarachnoid space, or the brain. When the frontal, temporal, or cerebellar abscess is closely contiguous to the sinus or mastoid from which it springs and evidence of a lead is found, the abscess is drained along the tract of entry. If the abscess does not seem to be contiguous, and no lead is found, the case is transferred to the neurosurgeon, who can operate through a clean field and is better able to get at the abscess.

Subdural empyema has never been a common complication; since the advent of chemotherapy it occurs even less frequently. Lateral sinus thrombosis, the most frequent of all prechemotherapy complications, has almost entirely disappeared. Meningitis still occurs too often, but the morbidity and mortality are steadily on the wane. Next to meningitis, brain abscess is the complication most commonly seen.

Epidural abscess is not, strictly speaking, an intracranial complication. However, since it not infrequently leads to infection within the cranium and is so often found in association with it, epidural abscess cannot be omitted from any discussion of intracranial complications.

EPIDURAL ABSCESS

Epidural infection may extend from an infected sinus or mastoid to the dura and give rise to epidural granulation or abscess. A large amount of pus is unusual. Epidural infection seldom gives rise to increased intracranial pressure, stupor, or focal signs; if these symptoms and signs have been present in cases in which epidural infection is found at operation, it usually means that the infection has extended further and that subdural empyema or a brain abscess may be present.

Sometimes a large epidural abscess simulates more serious intracranial pathologic conditions. The following case is an example:

CASE 1.—M. B., a white, 16 year old girl, was admitted to the hospital in November, 1947, with an exacerbation of right chronic suppurative otitis media. She complained of earache, generalized headache, and vomiting of five days' duration; for the twenty-four hours preceding admission she had been having generalized convulsive seizures. Physical examination showed slight rigidity of the neck. Copious, foul pus was draining from the right middle ear. The patient was stuporous but showed no localizing neurologic signs. Visual fields could not be tested because of her mental status. Roentgen-ray examination revealed a sclerosed mastoid. Spinal fluid was normal. Possible diagnoses were subdural empyema or brain abscess.

A right radical postaural mastoidectomy was done. A large extradural abscess was found and from 6 to 8 cc. of purulent material was drained from underneath a normal-appearing tegmen plate. The dura was not necrotic, and it was free of granulations. The patient regained consciousness immediately after operation; the following day her mental status was normal and she felt well.

The infecting organism proved to be Bacteroides funduliformis. Penicillin and sulfadiazine were administered for ten days. To date, the patient has been symptom-free, and the ear is dry.

Most surgeons at the Massachusetts Eye and Ear Infirmary believe that for uncomplicated chronic suppurative otitis media and for labyrinthectomy the endaural mastoidectomy is best; for any other otitic complication we choose the postaural approach.

THROMBOPHLEBITIS

Thrombophlebitis of the lateral and cavernous sinus presents a clear-cut picture, but when it involves the superior longitudinal sinus the physician can make a definite diagnosis only at operation or post-mortem.

The veins of the paranasal sinuses drain into the superior longitudinal and cavernous sinuses, and those of the middle ears and mastoids into the petrosal and lateral sinuses. Infection of these bony cavities can result in thrombophlebitis, which may spread along a vein to a venous sinus. The cerebral veins also empty into the venous sinuses, and a sinus thrombophlebitis can extend along these in a retrograde direction. Thus the infection may extend from the infected venous sinus to the subdural space, giving a subdural em-

Read before a general meeting, State Medical Association of Texas, Annual Session, San Antonio, May 5, 1949.

pyema, or it may spread along cerebral veins to the cerebrum or cerebellum, resulting in a subsequent cerebral or cerebellar abscess.

Until the discovery of chemotherapy, lateral sinus infections were the most frequent intracranial complications of otitic disease. Most otologists can recall the once familiar pattern of high, swinging temperature, chills, headache, and a positive blood culture. Along with these, there would sometimes be found an increased spinal fluid pressure and a positive Tobey-Ayer test. The patient almost always appeared less sick than he actually was.

We rarely see these cases at the Eye and Ear Infirmary any more. Our most recent house officers, as a matter of fact, have never seen a case. This state of affairs certainly affords a striking contrast to the 'twenties and 'thirties, when a half dozen such patients might be seen on the wards at one time.

Infrequently, when the lateral sinus thrombosis was of a spreading type, apparently involving the torcular Herophili and the opposite lateral sinus and extending through the petrosal sinuses, the picture was that just described with, in addition, tremendously increased intracranial pressure, choked disks, and contracted fields —a pattern hard to distinguish from brain abscess.

Now that sinusitis, otitis, and furunculosis of the nose and upper lip are treated early with antibiotics, the cavernous sinus thromboses and lateral sinus thromboses occur rarely. Superior longitudinal sinus thrombosis occasionally complicates the infrequent frontal bone osteomyelitis.

In simple mastoidectomies there are still a good many perisinus abscesses with areas of granulation on the lateral sinus. With antibiotic treatment—even inadequate antibiotic treatment—these abscesses do not lead to thrombophlebitis as they did in the past. Theoretically and practically, the surgical drainage of epidural and perisinus abscess is the most effective treatment to give because, by preventing extension of the condition to the intracranium, the physician saves the patient from a long, serious, and costly illness.

Before the advent of chemotherapy, cavernous sinus thrombosis was invariably fatal. Now, if the diagnosis is made early and adequate treatment is given, the patient has a good chance to recover.

SUBDURAL ABSCESS

Subdural empyema or abscess is generally regarded as a rare complication clinically indistinguishable from other forms of intracranial suppuration, notably, brain abscess, sinus thrombophlebitis, or meningitis. I believe that subdural empyema is a definite clinical entity and not too difficult to differentiate from other intracranial complications.

Dr. Charles S. Kubik, chief of neurology at the Massachusetts General Hospital, with Dr. Raymond D. Adams has written a monograph on this subject that is a classic, and in it is given a report of 14 cases seen at the Massachusetts Eye and Ear Infirmary and Massachusetts General Hospital from 1939 to 1943 inclusive.

The term subdural empyema, or subdural abscess, denotes a collection of pus between the dura and arachnoid. It usually results from frontal or ethmoid sinusitis or from otitis media. Most of our cases were seen with an acute exacerbation of a chronic sinusitis. Headache, usually fairly severe, is generally the first symptom. The temperature rises to from 102 to 105 F. and the patient looks seriously ill. Physical examination shows a rigid neck and, in most of the cases that complicate sinusitis, orbital swelling. Within two to five days, occasionally later, drowsiness develops, followed by stupor and coma. At about the same time, focal signs appear; convulsive seizures of the Jacksonian type, paralysis of the muscles controlling contralateral conjugate eye deviation, and, in lesions of the dominant hemisphere, aphasia occur.

The spinal fluid is under increased pressure and usually contains from 300 to 500 cells—predominantly polymorphonuclear leukocytes—per cubic millimeter. Protein content is elevated, but there is a normal sugar level. Organisms are not found in the spinal fluid as a rule.

The course is rapid and death occurs within several days of onset if the pus is not drained. Postmortem examination showed in most cases reported by Drs. Kubik and Adams that infection of the subdural space took place by direct extension from the frontal sinus, ethmoid cells, or middle ear through bone and dura; in other cases, infection had resulted from thrombophlebitis of the venous sinuses. The pus not encapsulated filled the space between the dura and arachnoid membrane and usually covered a large part of the lateral surface of the cerebral hemisphere. Beneath this exudate lay a localized subarachnoid exudate (meningitis), and there was some necrosis of the underlying cerebral cortex.

The factors that contribute to the development of subdural empyema rather than cerebral abscess or leptomeningitis are not understood. It may be significant that nearly all cases followed an acute exacerbation of a chronic sinus infection; apparently barriers to deeper spread had been developed in the course of time, depending on the virulence of the organism and the resistance of the host.

As has already been stated, subdural empyema is not difficult to differentiate from other intracranial complications. Absence of organisms and a normal cerebrospinal fluid sugar are not indicative of pyogenic meningitis. A cerebral abscess rarely shows such a rapidly progressive course and never produces as high

a temperature as subdural empyema unless it has ruptured into the ventricular system. A sagittal sinus thrombosis may possibly be confused with a subdural empyema since it also may cause an increase of intracranial pressure, a mild pleocytosis of the cerebrospinal fluid, convulsions, and focal signs. The neck is not as stiff, however, and the temperature is of the septic type. Sinus thrombosis and subdural empyema may occur simultaneously. In this event, and in any other case in which the otologist is in doubt, burr-hole exploration will help in making the diagnosis.

The most important thing to remember about the treatment of subdural empyema is that it must be started at once to be of any use at all. Too often we otologists do not recognize, or even suspect, the condition. Usually it is mistaken for septic meningitis and operation is not even considered, or operation is delayed until some time after onset of coma and hemiplegia. By that time no treatment is likely to have any effect.

When the diagnosis of subdural empyema is reasonably certain, or even a likely possibility, exploration is imperative. Valuable time is too often lost operating for sinusitis, mastoiditis, or frontal bone osteomyelitis. These are of secondary importance; they can wait until the more immediate and pressing danger from the subdural abscess has been removed.

The operation of choice at the Massachusetts General Hospital is drainage through one or two enlarged burr-holes in the lateral, frontal region, where the largest accumulation of pus has invariably been found. In addition to evacuating more pus more readily and getting better drainage, the otologist by choosing this area can get a clean field, make exposure easy, and get a good view of the dura; also, findings are not obscured by granulations, thickening of the dura, or changes brought about by previous operations.

The dura over a subdural abscess looks white because of the pus beneath it; the contrast between this and the normal appearance of dura is striking. The otologist can usually, if not always, tell whether subdural exudate is present or not simply by exposing the dura; if he is in doubt, incision of the dura in a clean field is recommended, provided the brain is not probed.

Obviously, antibiotic therapy and other measures well established in the treatment of sepsis should be used. A case in point follows:

CASE 2.—R. S., a 15 year old boy, was admitted to the hospital in April, 1940, with an acute right frontal sinusitis which had developed after he had been swimming. Soon after admission, he complained of severe headache and developed high fever, convulsions, and aphasia. The right side of his face was swollen and the eye on that side was partly closed, the pupil dilated, and the upward gaze painful. The neck was stiff and the right side of the body weaker than the left. The spinal fluid pressure was elevated to 230 mm. of water, with 21 cells per cubic millimeter, chiefly polymorphonuclear leukocytes. Blood culture was positive for staphylococcus. The diagnosis was thrombosis of the superior longitudinal sinus with a left subdural abscess. The abscess was drained and the sepsis treated. The patient recovered. After his recovery, the frontal sinus was operated upon.

MENINGITIS

Meningitis has a rapid onset marked by headache, fever, rigidity of the neck, positive Kernig sign, and often delirium, drowsiness, or stupor. Focal signs are rare. Spinal fluid is under increased pressure and cloudy or turbid. A count will show it to contain several thousand cells per cubic millimeter, predominantly polymorphonuclear leukocytes. The causative organism is found in smears and cultures of the fluid. Sugar and chlorides are reduced. Infection, in most of the cases that come to postmortem examination, has taken place by direct extension through bone, dura, and arachnoid membrane to the subarachnoid space.

All of the 11 patients with meningitis I recall in the past four years recovered. None of the cases followed subdural empyema or rupture of a brain abscess. All of them developed from a sinusitis or otitis through direct extension or thrombophlebitis. Of these 11 patients 3 developed meningitis coincidentally with an acute otitis media. In this group, except for paracentesis, surgery proved unnecessary. One patient developed meningitis on the twenty-fourth day of a pneumococcus otitis media; in this case a radical mastoidectomy was necessary. Radical mastoidectomies were also done in 4 cases in which meningitis followed a chronic otitis media; no macroscopic evidence of direct extension was observed. Two patients developed meningitis along with acute frontal sinusitis; in one of these cases, a simple trephine was made into the frontal sinus. In the 1 remaining case the record is not complete.

In the cases of acute infection, operation on the sinus or mastoid, with exposure and inspection of the dura, was not performed. I believe that the invasion of the meninges in this type of case occurs simultaneously with the invasion of the sinus or mastoid and that it is chiefly the meningitis that need be treated. The pathologists who perform the autopsies and study the microscopic sections report that the sinusitis or otitis does not continue to feed the meningitis—general opinion to the contrary. A minor procedure like paracentesis or even a trephine may be resorted to while the treatment for meningitis is getting under way, but such measures should be used ouly if they are indicated in a case without intracranial complication.

In cases in which meningitis develops as a sequela of chronic sinusitis or mastoiditis, the important thing to do is to make a definite diagnosis and treat the

meningitis. The patient should be saturated with the specific antibiotics, parenterally and intrathecally; given fluids intravenously; and treated with other general supportive measures. Only then, after he has been put in good shape, should he be subjected to surgery.

In this series of 11 cases, the organisms were pneumococcus in 5, Staphylococcus aureus in 2, Beta hemolytic streptococcus in 1. In the remaining 3 cases the spinal fluid showed no organisms on smear or culture, probably because of previous antibiotic therapy.

Everyone is more or less agreed on the correct sulfadiazine, penicillin, and streptomycin treatment by mouth or parenterally, but there is a great difference of opinion as regards intrathecal penicillin and streptomycin therapy. One of these pneumococcus meningitis patients received 200,000 units of penicillin intrathecally at his first dose with no ill effect. The optimal dose of intrathecal penicillin now, however, appears to be from 10,000 to 15,000 units every twelve hours until the organisms disappear from the spinal fluid and the patient's general condition improves.

Intrathecal streptomycin dosage is 50,000 mg. every twelve to twenty-four hours in 10 to 15 cc. of normal saline solution until the organisms disappear from the spinal fluid and the general condition improves. Dihydrostreptomycin is an improvement over streptomycin hydrochloride, being much less toxic to the eighth nerve, and is used intrathecally. Aureomycin and chloromycetin when given by mouth diffuse into the spinal fluid slowly.

In this series of cases, a good percentage of patients was never extremely ill. The only sequela noted was blindness in one eye, which developed in 1 case.

BRAIN ABSCESS

Brain abscess may result from frontal sinusitis or otitis, occasionally from ethmoiditis. I have never seen it complicating a primary meningitis. It occurs by "direct extension" of infection or as a result of thrombophlebitis of a venous sinus. A brain abscess occurring as a complication of frontal sinusitis or ethmoiditis will be found in the frontal lobe; abscess resulting from otitis or mastoiditis occurs in the temporal lobe or cerebellum, occasionally in both the temporal lobe and cerebellum.

Like other intracranial infections already discussed, brain abscess is usually preceded by the acute exacerbation of a chronic sinusitis or a discharging ear. The important initial symptom is headache. The temperature may rise slightly or not at all. The course is usually fairly slow, often consuming weeks, sometimes months. Vomiting, drowsiness, stupor, and eventually coma develop as intracranial pressure increases. Focal signs depend on where the abscess is. In frontal lobe abscess there may be no focal signs because the lesion is usually far forward in a so-called "silent area." There may be a hemiparesis, increased activity of the contralateral tendon reflexes, or aphasia. In temporal lobe abscess the most common focal sign is homonymous hemianopsia due to involvement of the optic radiations; if the dominant hemisphere is involved, inability to name familiar objects (anomia) commonly results. The focal signs most often observed with cerebellar abscess are, as might be expected, nystagmus, unsteadiness, intention tremor, and hypotonia.

Spinal fluid is usually under increased pressure and contains from 10 to 20 up to 100 or more cells per cubic millimeter, lymphocytes predominating. Occasionally, no cells will be found in the spinal fluid.

Electroencephalograms, according to Dr. Robert Schwab of the Massachusetts General Hospital, show some disturbance in from 85 to 90 per cent of cases with intracranial pathologic conditions, but they do not have too much value in localizing the disturbance. It is believed that air injection may have localizing value in roughly 20 per cent of cases.

Death, when it occurs, results as a rule from meningitis or from increased intracranial pressure. Occasionally a cerebral abscess will rupture into the lateral ventricle and cause meningitis.

In 1939, 2 cases of temporal lobe abscess came to my attention; successful drainage was accomplished and the patients recovered without the aid of antibiotics:

CASE 3.—A 12 year old girl was admitted to the hospital in May, 1939, with a temperature of 101 F., left frontal headache, vomiting, and poor memory; the symptoms had appeared several days before. Six weeks before that, her left ear drum had been incised; four weeks preceding admission a left simple mastoidectomy had been performed. When we saw her, the middle ear and mastoid were draining pus. Physical examination also revealed papilledema, visual field defects, weakness of the right lower part of the face, and anomia. Spinal fluid was clear but under increased pressure.

A secondary mastoidectomy was performed; the middle fossa dura was tense and covered with granulations. After the area was encircled and the dura sealed to the arachnoid by means of diathermy, crucial incisions were made in the middle fossa dura; a large temporal lobe abscess was drained and a rubber drain inserted.

The organism proved to be staphylococcus.

The patient recovered.

CASE 4.—A 16 year old white boy was admitted in June, 1939, to the hospital, dull, listless, and sleepy. Five weeks before, the right ear had begun to show suppuration. After ten days it had dried up, but four days later the boy was said to have developed headache, vomiting, and stiff neck. At that time, the spinal fluid was reported to have shown 90 polymorphonuclear leukocytes per cubic millimeter. Since the boy improved over the next two weeks, it can be assumed that this period marked the invasion of the brain abscess. When he entered the hospital, he showed a mild nuclear rigidity, homonymous hemianopsia, mild choked disks, facial

weakness in the left lower area, and increased tendon reflexes on the left side. The spinal fluid pressure was increased to 450 mm. of water with normal chemistry and 24 lymphocytes. Roentgen-ray examination showed a cloudy mastoid on the right side.

At mastoidectomy were found a small necrotic area on the middle fossa dura and a large temporal lobe abscess, which was drained of 1.5 ounces of type 27 pneumococcus pus. The patient made a complete recovery.

Another patient with a cerebellar abscess could, I think, have been handled better than he was:

CASE 5.—A 45 year old man was admitted unconscious to the hospital in February, 1948. A history of occipital and frontal headache and increasing drowsiness, with nausea and vomiting of several days' duration, was given. Sulfadiazine and penicillin therapy had been tried without good effect.

Physical examination showed a bilateral chronic pansinusitis and bilateral chronic suppurative otitis media; the right ear showed more active suppuration than the left and showed evidence of acute exacerbation. No localizing neurologic signs were present, but the neck was stiff and the spinal fluid showed 330 cells, 30 per cent of them polymorphonuclear leukocytes and 70 per cent lymphocytes.

A ventriculogram revealed dilated lateral and third ventricles with no air in the aqueduct or in the posterior fossa. Burr holes were made in a search for subdural empyema, but none was present. On the strength of evidence that the right chronic otitis was the most active focus of infection and lacking ventriculographic evidence of cerebral abscess, the neurosurgeon explored the right cerebellum, where he found and dissected out a large abscess. Afterward, I opened the right mastoid and found pus under pressure in the mastoid and an area of necrotic cerebellar dura medial to the lateral sinus, from which more pus exuded.

The abscess might have been drained satisfactorily through this necrotic lead by rubber tube and the extensive cerebellar damage caused by the dissection thereby avoided, or it might have been enough to drain the abscess through the mastoid route of entry and tap it through the posterior route. As it is, today—a year after the operation—the patient has considerable ataxia and poor coordination, even though all brain and ear infections have been cured.

The infecting organisms proved to be Escherichia coli, Streptococcus nonhemolyticus, Bacillus proteus, and Bacteroides. Penicillin and streptomycin were instilled into the brain cavity from which the abscess had been dissected; they were also injected intramuscularly.

Neurosurgeons at the Massachusetts General Hospital have been successful in handling by conservative measures the brain abscesses not drained through sinuses or mastoids. After the abscess is located, a simple tapping is usually done and the contents of the abscess withdrawn; after this procedure, the proper antibiotic is instilled. This may be repeated and, if necessary, followed by the insertion of a rubber tube, which remains in place for further withdrawals and instillations. If the abscess is near the surface and has not responded to these measures, marsupialization by sewing the abscess capsule to the dura, allowing the abscess to evert itself, is recommended. If the abscess is deeper and more inaccessible, a circular plug of overlying brain tissue may have to be removed by diathermy to establish adequate drainage.

I do not favor attempting to dissect out an abscess with its capsule from the frontal or temporal lobe to avoid possible delayed epileptic seizures. I prefer to wait until epilepsy has actually developed and then attempt to dissect out the scar tissue.

The brain, like every other organ in the body, can take a great deal more surgical trauma when the patient is saturated with antibiotics, but gross destruction of brain tissue cannot be remedied.

Since abscesses in most instances occur in areas near the source of infection, the physician can sometimes rely on his clinical judgment and observations and avoid ventriculography with its attendant dangers of abscess rupture and pressure cone.

Sometimes the period of invasion can be recognized. Pathologically, this is a thrombophlebitis with venous infarction, giving rise to abscess. Even though the physician may think he recognizes this period of invasion, he cannot always wait for a thick capsule to form. His hand may be forced by the severity of the symptoms and signs. Drainage should be carried out as soon as the diagnosis is definite. Postponing operation may lead to rupture of the abscess or death from a pressure cone.

SUMMARY

Some of the debatable points having to do with intracranial complications of otogenic and rhinogenic disease are touched upon. The intracranial infections discussed are epidural abscess, thrombophlebitis, subdural empyema, meningitis, and brain abscess. A comparison of the frequency, severity, and treatment of these diseases before and after the advent of antibiotics is made.

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RESISTIVE EXERCISE AFTER CHEST SURGERY

A postoperative exercise program introduced at the Veterans Administration Hospital at Oteen, N. C., about three years ago has proved helpful in elimination or minimizing skeletal and functional deformities resulting from chest surgery for tuberculosis and in arresting the disease. The Physical Medicine and Rehabilitation Division and the Tuberculosis Division of the Veterans Administration have reported that in a study in which one group of 80 surgical patients did not undergo the exercise procedure and another group of 66 patients did follow the program, the latter appeared to have received better results.

The program begins with the patient's preoperative orientation to give him an understanding of the part he must play in preventing deformity by maintaining a straight spine through his postoperative hospitalization. After each surgical stage, over-correction measures in bed positioning are carried out and a gradually graded resistive exercise program under close supervision of the physician and physical therapist is continued for several months.

ACUTE INFECTIOUS MAXILLARY SINUSITIS

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A THOROUGH understanding of the anatomy and physiology of the maxillary sinus is essential for the proper management of acute infections. It is the most frequently involved of the paranasal sinuses and is the most amenable to treatment if such treatment is based on sound physiologic and anatomic principles.

The maxillary sinus, or antrum, may be considered as a three sided pyramid with the naso-antral wall as the base and apex extending into the zygomatic process. It is bounded above by the orbit; posteriorly by the pterygomaxillary fossa; and below by the alveolar process of the superior maxilla. It is the one sinus common to all mammals. There is a great variation in size, although the capacity of the average adult is from 10 to 15 cc. Sometimes there are recesses or subcompartments formed by osseous or membranous septums. In the adult the floor of the antrum is below the level of the floor of the nose except in cases of unusually small antrums in which the reverse may be true.

The naso-antral wall tends to curve outward in a concave fashion, especially in the inferior meatus. Pathologic conditions within the antrum may produce a bulging mesially of the thin membranous portion in the middle meatus. Although the naso-antral wall is thick near the floor, it becomes much thinner near the attachment of the inferior turbinate. Consequently, puncture through the inferior meatal wall should be done at its highest point.

The ostium of the antrum is situated high on the naso-antral wall, whence it opens into the posterior part of the infundibulum. This opening varies in size and may be multiple. It is usually oval or elongated. There may be accessory ostiums, posterior and lower than the normal ostium and usually larger, draining directly into the middle meatus.

The lining mucosa is ciliated columnar epithelium and is a continuation of the nasal mucous membrane. Normally it is thin, is pearly gray in color, and contains tubo-alveolar mucous glands.

In the correction of pathologic processes, an attempt should be made as far as possible to conserve normal functions of structures. The defense elements of the maxillary sinus lie in the ciliated epithelium which lines the cavity. The cilia which wave in the direction of the ostium and the sheet of mucous which covers them serve as a primary defense mechanism.

Read before the Section on Eye, Ear, Nose, and Throat, State Medical Association of Texas, Annual Session, San Antonio, May 3, 1949.

A secondary defense is found in the stroma of the mucous membrane.[3] Infection resisting cells pass through the walls of the capillaries to augment the function of the locally active histiocytes. In an infection these cells pour out in large numbers to engulf and destroy the pathogenic invaders. Ciliary action and not gravity is the most important factor in removing secretions from the antrum. This removal is augmented by the rise and fall of pressure in the nasal cavity during respirations, causing a synchronizing rise and fall of pressure within the antrum.[2]

SINUS INFECTIONS

In an acute sinusitis the immediate reaction to the invasion of pathogenic organisms results in a swelling of the tissues which constricts the lumen of the ostium and retards, or blocks completely, the discharge of pus from the sinus.

Other factors which play a part may be classified under two headings:

1. Anatomic, including an impinging middle turbinate which is especially important, an overhanging ethmoid bulla, a high uncinate process, a small ostium, a narrow hiatus semilunaris, polyps blocking the ostium, edematous mucous membranes of allergic origin, and hyperplastic mucous membranes from an old chronic involvement.

2. General factors which delay spontaneous recovery, such as sudden weather changes, the patient's habits, temperament and indulgences, gastrointestinal disturbances, nutritional deficiencies, endocrine imbalances, debilitating diseases, and associated infections.

From an etiologic standpoint there are four types of acute maxillary sinus infections: (1) a complication of coryza, which is by far the most common; (2) a direct infection from swimming and diving in polluted waters, which is common during the summer; (3) a result of dental conditions, originating from either an apical abscess or following an extraction; and (4) a result of allergy, which is not within the scope of this paper.

Little need be said about the symptoms and diagnosis of acute maxillary sinusitis. If the patient has had previous attacks, he will make his own diagnosis. If he has not, he will often go to his dentist first because of the pain in his jaw simulating toothache. The usual case is easily recognized by history of a cold or influenza, nasal discharge, pain in the upper jaw exaggerated by stooping and sometimes referred to the brow, tenderness on pressure over the canine

fossa, persistent cough, nasal obstruction, and general malaise.

In the summer season a history of swimming in polluted waters may antedate an acute onset.

Sinus disease of dental origin should be considered if the patient is vague about the onset of his symptoms. Dentogenic infections of the antrum comprise about 10 per cent of all cases and are usually characterized by the presence of a malodorous discharge.

On examination of the nasal cavity, the mucous membrane of the turbinates is swollen and congested. Pus may be seen exuding from under the middle turbinate and even covering the floor of the nose. Transillumination, especially in unilateral cases in which there is a basis for comparison, is of definite aid. Roentgen ray, although a helpful adjunct, is seldom necessary to make a diagnosis in an acute case. Its value lies in diagnosing concurrent pathologic conditions.

In all cases of coryza in which there is a profuse nasal discharge there is undoubtedly involvement of the sinuses. Why should any infectious process cease activity the moment it reaches a sinus ostium when the mucous membrane of the nasal cavity and sinus is continuous?

A majority of acute cases of maxillary sinusitis are not seen by the rhinologist because free drainage afforded by adequate natural outlets permit a spontaneous recovery without pain.

In an acute attack the patient goes to the rhinologist primarily for the relief of pain, and if it is not pain, it is a profuse drainage which has persisted for a number of days.

TREATMENT

It is simple to prescribe rest, sedatives, and hot compresses, but it is highly probable that the patient has already tried these measures and has found that he had less pain when he was up than when he was lying down. Such a procedure amounts to an outright invitation from the physician for the patient to go elsewhere for relief.

An acute maxillary sinusitis is an abscess of the sinus cavity. An abscess is a localized collection of pus within a cavity. In the treatment of an abscess there is one absolute rule which knows no exception, namely, that the pus should be evacuated and adequate drainage established. Then why the trepidation on the part of the rhinologist when he is faced with an acute condition of the antrum? The answer, of course, is fear of complications—osteomyelitis, intracranial complications, and so forth; yet there is no hesitancy in draining a frontal lobe abscess, and external trephination in an acute frontal sinus infection is beginning to be looked upon with favor.[1]

Irrigation Technique

Irrigating a suppurative antrum is a minor procedure. The following technique has been used in my office for more than ten years with no complications of any consequence.

The nasal cavity is sprayed with 1 per cent ephedrine solution, and if sufficient shrinkage is not obtained, a small amount of Privine Hydrochloride is sprayed in the region of the middle turbinate. I do not use tampons or cotton applicators because of the injury they cause to the ciliated epithelium. Frequently, secretions in the nasal cavity must be removed with a suction tip before sufficient shrinkage is obtained.

For anesthesia a small cotton applicator is moistened with Adrenalin Chloride and allowed to absorb a few crystals of cocaine hydrochloride. This applicator is then gently placed under the anterior tip of the inferior turbinate and directed posteriorly and laterally, so that the anesthesia is placed high in the inferior meatus against the lateral wall about .75 inch posterior to the anterior tip. Usually a slight concavity which indicates the thinnest portion of the wall is felt. The applicator is left in place about fifteen minutes, then removed.

A 14 or 16 gauge straight trocar with a bevel point is inserted under the inferior turbinate in the same manner in which the cotton applicator was introduced. If the trocar does not penetrate the naso-antral wall without pain and without too much pressure, a gentle rotation of the needle with its bevel point will bore a hole through the wall. The bevel of the needle is directed medially. In either case the opening is made obliquely through the wall, and when the needle is withdrawn, it leaves no permanent opening. As soon as the point of the needle is in the antrum, the stylet is pushed through and the trocar introduced farther. The stylet is then withdrawn, the head tilted forward, and the antrum irrigated with warm normal saline solution. Irrigation is continued until the return is clear. Air is introduced with the head tilted and rotated to evacuate as much saline solution as possible. Then 2 cc. of 1:4,000 solution of Merthiolate is instilled in the antrum, not for any therapeutic effect, but to stain subsequent exudate in the antrum. The head is steadied and the trocar removed.

The patient blows his nose thoroughly but gently, blowing through one side at a time, and then the nasal cavity is lavaged to remove any remaining exudate. He is instructed to note the color of what he subsequently expells from his nose. If the exudate is pink, the antrum alone is involved and is draining some; if the exudate is mixed pink and yellow, the antrum is draining and other sinuses are probably involved; if the exudate is yellow, other sinuses are involved and the maxillary sinus is not draining; and

if he expells nothing, the antrum is not draining and other sinuses are probably not involved. In the latter case, pus evacuated at subsequent irrigations of the sinus will be colored pink.

Such a procedure usually gives immediate relief of pain, and there is no destruction of anatomic parts. The natural physiologic process is augmented rather than retarded by decreasing the load on the cilia. The possibility of toxic manifestations is diminished by removal of pus and the period of disability is shortened. There is no trauma to the nasal mucosa except where the needle penetrates the meatal wall; the inferior turbinate never has to be elevated or infracted; and there is seldom any bleeding. Shock to the average patient is negligible.

This procedure may be repeated on alternate days and even daily if symptoms justify it. If symptoms subside and there is a decrease of pus in the washings with each irrigation, treatment is continued until the return is clear.

Other Therapy

If the antrum does not drain naturally following several irrigations and if much resistance is encountered in evacuating the pus through the ostium, steps must be taken to afford a more adequate natural drainage. As swollen, edematous mucosa in the middle meatus often causes the obstruction, simple and careful infraction of the middle turbinate will often suffice.

In the event resolution does not occur in a reasonable period of time an intranasal antrotomy may be done. Frequently this procedure is carried out when the turbinate is infracted.

A large intranasal opening is not necessary unless there is considerable hyperplasia of the sinus mucosa. In such instances the mucosa has lost its physiologic ciliary action and drainage has to be accomplished by gravity. This condition occurs in the chronic cases.

The instillation of sulfonamide solutions and suspensions following irrigation in my experience has been disappointing and consequently abandoned. Likewise, I have not been enthusiastic over results obtained from instilling solutions of penicillin, tyrothricin, and gramicidin in the antrum. I have not used bacitracin or aureomycin. However, in acute antrum infections in which there is associated fever, one or more of the antibiotics are given by mouth or hypodermically, or both, until the temperature is normal.

If the acute case is handled properly, the sinus mucosa will restore itself to normal and the flow of the mucous blanket propelled by the cilia will afford better drainage than through an artificial opening.

Early treatment of acute maxillary sinusitis will decrease the necessity of subsequent radical surgery which entails the destruction or abolition of anatomic and histologic parts. Under certain conditions or circumstances, such intervention might be justifiable but is scientifically unsound.

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ABSTRACT OF DISCUSSION

DR. PALMER WOODSON, Austin: It is well to remember that in an acute infection of the upper respiratory tract the sinuses are always involved, and an acute maxillary sinusitis is second only to that of an ethmoiditis. The maxillary sinus mucosa is pseudostratified, ciliated, columnar epithelium and differs from that of the nasal cavity only in that there is a preponderance of goblet cells; hence the extension of the infection from the nasal cavity through the maxillary ostium.

Dentogenic infections of the antrum have a characteristic foul smelling nasal discharge which is similar to the odor of a foreign body in the nose, and this may be considered if careful search fails to reveal a sinus infection.

I prefer not to irrigate the sinus during the early stages when there is an elevation of temperature and local immunity has not been established. Sinus lavage may be accomplished with a dull tip antral cannula through the natural ostium and Coakley trocar or Lichwitz needle to puncture through the osseous naso-antral wall. My preference is the Coakley trocar since the sinus can be irrigated three or four days later if necessary through the original opening with less discomfort and trauma.

I believe it is safer not to consider an intranasal antrotomy until the acute infection of the sinus has subsided. To get the best result then, I have found that the intranasal opening should be at least 1 cm. in diameter, provided there is no encroachment nor trauma to the orifice of the nasolacrimal duct in the inferior meatus.

Blind in Dark Room Work

The possibility of training and employing blind persons for permanent jobs in dark rooms where roentgen-ray films are processed has been advocated by a St. Louis physician, Dr. Sherwood Moore, writing in the November *American Journal of Roentgenology and Radium Therapy.*

Dr. Moore points out that the best technique employed by roentgen-ray specialists is only as good as the dark room processing of the films. He reports that he employed three blind men in his laboratory and that after a month's training they acquired manual proficiency which justified attempting to use them under actual working conditions. He found that blind employees can unload and load and place a film in solution as speedily as can a technician with sight.

"Success in employing blind dark room technicians depends upon the selection of suitable individuals who should be thoroughly trained in advance of embarking on the actual work. The selection should be left to the state or federal agencies for the blind. These agencies have the facilities for giving aptitude tests and finding persons with the proper background."

CHRONIC SUPPURATIVE OTITIS MEDIA AND MASTOIDITIS

Management

J. DUDLEY SINGLETON, M.D., Dallas, Texas

MORRISON[5] has defined chronic suppurative otitis media and mastoiditis as "an inflammation of the tympanic cavity, the mastoid antrum and whatever mastoid cells may be present, characterized by scar tissue and perforation of the drum with continuous or intermittent purulent discharge." If the mastoid cavity is involved, the infection should always be considered with concern. If neglected or improperly treated, the condition may progress to a serious or even a fatal complication. In the management of these cases, the objective is to secure a dry ear, preserve serviceable hearing if present, and prevent complications. An exact knowledge of the anatomy of the middle ear and its adnexa, an understanding of the pathologic processes with which he is dealing, and meticulous care of each individual case are imperative if the physician is to expect the maximum of success in the attainment of that objective.

ANATOMY

In the infant the eustachian tube is relatively shorter, broader, and more patulous than in the adult. The bony external auditory canal and the mastoid process are not developed. Pneumatization is confined to the antrum with possibly a few small adjacent cells. The bony middle ear cavity and the ossicles are well developed and approximately adult in size. The mucosa lining the tympanic and antral cavities is thick and embryonal in character; in the attic and antrum it is redundant, lying in folds with numerous pockets.[1, 2] Such a membrane predisposes to infection, chronicity, and complications. Normally, the development of the middle ear and mastoid is rapid. By the end of the second year pneumatization is beginning to extend beyond the base of the petrous pyramid. The first cells that develop are always deeply placed and are in contact with the dural and sinus plates. By the end of the fifth or sixth year full adult pneumatic development has occurred.[8] At this stage the mucous membrane has resorbed, becoming thin and closely adherent to the underlying bone. Occasionally resorption of the membrane fails to occur and it remains embryonal in character even in the adult.

A transverse section of the posterior portion of the attic shows it to have the shape of an inverted truncated triangle, wide above and narrow below. In this region are located the ossicles with their ligaments, the tendons of the tensor tympani muscle, the folds delineating Prussak's space, and the chorda tympani nerve all tending to block the constricted space separating the posterior portion of the attic and the mastoid from the tympanum.[6] This structural arrangement is of prime importance in the presence of infection because of the ease with which inflammatory changes in this region can block or interfere with drainage from the mastoid.

ETIOLOGY AND PATHOLOGY

Little need be said in this discussion concerning the etiology of chronic middle ear and mastoid suppuration. The age of the patient is a definite factor. Most of these infections begin in infancy or early childhood. The short patent eustachian tube of the infant and small child, the embryonal type of mucous membrane with its folds and pockets, the frequent infections of the upper respiratory tract with their middle ear complications are all important etiologic factors. Middle ear infections complicating measles, scarlet fever, and diphtheria are especially prone to chronicity. Neglect and improper treatment of the infection in its earlier acute and subacute phases are also definite factors in many cases.

The pathologic manifestations encountered in chronic suppuration of the middle ear and mastoid vary greatly in different cases. There is always impairment of the hearing. There is always a variable amount of drainage, continuous or intermittent; the drainage usually has a foul odor; if the odor persists after thorough cleansing for a few days, it indicates bone necrosis. There is always performation of the drum membrane. The perforation may be small or it may have destroyed the entire drum membrane; it may involve either the tense portion or the flaccid portion of the membrane; it may be central or marginal. Central perforations, regardless of size, usually indicate involvement of the middle ear only. Marginal perforations involving the superoposterior portion of the drum and perforations in Shrapnell's membrane always indicate infection of the attic, and in most such cases the mastoid is also affected. There is often granulation tissue. Such tissue may arise from the margin of the perforation, from the promontory, or from the attic; it sometimes fills the entire external auditory canal, as a polyp, interfering with drainage and completely obstructing a view of the drum membrane.

The pathologic changes within the mastoid depend to a great extent upon the age of the patient at the onset of the disease. When the process dates from the early months of infancy, it will be confined to the

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tympanum and the antrum. The overlying cortex will be thick, dense, and sclerotic. If the original infection developed after the third year of life, rather extensive pneumatization with varying degrees of involvement of the different cell groups can be expected. (It has been my experience that chronic infection in the pneumatized mastoid greatly increases the hazard of such complications as meningitis, brain abscess, and lateral sinus thrombosis. With but few exceptions, these complications have occurred, in my practice, in pneumatized mastoids.) In all cases of chronic suppuration, the physician may expect to find inflammation, exudation, ulceration, granulations, fibrosis, epithelialization, cholesteatoma, bone necrosis, bone erosion, and bone proliferation in one combination or another. Continued erosion of bone in time inevitably results in exposure and involvement of adjacent structures. When they are confined within the bony structures of the attic and mastoid, chronic granulations, chronically inflamed and thickened membranes or fibrous masses, and cholesteatomas, in addition to producing necrosis and erosion, often interfere with or completely block drainage. Drainage may also be blocked as a result of bony proliferation. Such interference with drainage greatly increases the danger of extensions with serious complications.

TREATMENT

With the above facts in mind it is apparent that treatment of chronic suppurative otitis media and mastoiditis must be adapted to the individual case. In some cases local medical measures alone will suffice. In others it is evident that immediate surgical intervention is indicated. When surgical treatment is definitely indicated, it should not be delayed.

If the history of the case and a careful examination indicate a simple chronic suppurative otitis media, careful cleansing of the ear with capillary suction and dry cotton on a flexible applicator is indicated. Any granulation tissue should be removed by instruments or a cauterizing agent or both. As an antiseptic the physician may use one of the sulfonamide powders or Sulzberger's powder, weak or strong. Favorite antiseptic solutions may also be used. I prefer the dry treatment. In these cases attention should also be directed to infections in the nose and throat and to the patient's general health. Most cases of simple middle ear suppuration will respond favorably to adequate well chosen treatment. In those cases that do not respond favorably, the otologist should keep in mind the fact that he may be dealing with a mastoiditis which should be treated by surgery. When such is the case, the use of a Siegle's otoscope may reveal creamy pus coming from the attic region. Roentgen-ray examination of the mastoids is of value in arriving at a diagnosis if there is sufficient pneumatization of the mastoid. Persistent drainage from the region of the attic, even in the presence of a central perforation, indicates attic and mastoid infection, and all such cases should be operated upon.

Chronic suppuration in the presence of a perforation in Shrapnell's membrane or a marginal perforation in the posterior superior quadrant of the tense portion of the drum membrane is a definite indication of infection in the attic and, in most instances, of the mastoid. In selected cases of this nature, good results may be obtained by use of measures similar to those outlined for the treatment of simple chronic suppurative otitis media.

Regardless of the site or size of the perforation in the drum membrane, if careful studies point to infection in the attic and mastoid and if this infection persists in spite of adequate well chosen conservative treatment, surgical intervention is indicated and should be instituted. Delay invites tragedy.

Indications for surgical treatment include (1) persistent infections in the mastoid that do not respond to adequate well chosen treatment; (2) cholesteatoma; (3) cessation of drainage with increase in symptoms, pain, headache, fever, and so forth; (4) subperiosteal or Bezold's abscess (these abscesses are rare and occur in the pneumatized mastoid); (5) signs and symptoms of intracranial irritation; and (6) intracranial complications.

Operative Methods

For descriptive purposes the terms tympanomastoidectomy and modified tympanomastoidectomy will be used to designate the operations more commonly referred to as the radical and modified radical mastoidectomies.

The operation of choice depends in part upon the location and extent of the lesion and in part upon the hearing of the patient. If the infection is confined to the attic and mastoid with the tense portion of the drum membrane intact, a modified tympanomastoidectomy should be considered. If the ear to be operated upon is the better hearing ear and shows a loss of not more than 35 decibles, the modified operation is definitely indicated and the complete tympanomastoidectomy should be avoided if possible.

In the surgical treatment of mastoid disease the otologist now has the choice of dental drills and burrs and specially designed curets and rongeurs, or of the hammer, gouges, chisels, and the old type rongeurs and curets. If the dental drills are used, the otologist may choose either the endaural or postauricular approach. I prefer the former. If the hammer, gouges, and chisels are used, the postauricular approach is ad-

vised. In the use of the hammer and chisels, the operation is greatly simplified by removing the posterior canal wall along with the cortex, using the superior border of the bony canal as a guide to the antrum.[7] After removal of most of the cortex and the outer two-thirds or three-fourths of the bony canal wall, the antrum is easily entered by using a smaller gouge and entering at a level 2 or 3 mm. above the upper margin of the bony canal wall. Regardless of the technique used, after the antrum is opened all accessible diseased bone and soft tissues are removed from the mastoid cavity. A search is made for cell tracts extending down along the course of the facial nerve and backward beneath the inferior knee of the sinuses, also in the sinodural angle; if present, they are removed. If a modified operation is to be done, the remainder of the bony canal wall is removed to the level of the horizontal semicircular canal. The bridge is then removed, but the drum membrane is not disturbed. At this stage the head of the malleus is amputated if it is deemed advisable. The cavity is inspected and any ridges, overhanging ledges, or rough surfaces are removed. A plastic flap is made and the wound is packed with Carbozine or Vaseline gauze.

If a complete tympanomastoidectomy is being done, the mastoid portion of the operation is first completed, the bridge is removed, and then the diseased soft tissues are carefully removed from the attic and tympanum proper. At this stage the otologist must exercise great care not to injure the facial nerve or dislocate the stapes. The anterior and posterior abutments of the bony bridge are completely removed. The latter is more safely and easily removed with a rotary motion of a small curet working from above with the point of the instrument directed toward the hypotympanum. If the point of the instrument is directed upward, there is grave danger of injuring the facial nerve and of dislocating the stapes. Next the floor of the external bony canal wall, including the lip for the attachment of the drum membrane, is removed to the level of the hypotympanum. A search is made for hypotympanic, infralabyrinthian cells; if present they are removed with a small curet or polishing burr. The area about the mouth of the eustachian tube is inspected and all diseased cells in this area are removed. If the tensor tympani muscle is present, it is my practice to remove it. Goodyear[3] advised using the muscle to close the eustachian tube. The entire wound cavity is inspected and any spurs, ledges, or rough surfaces are removed. An attempt is made to avoid sharp angles where two surfaces join, since such angles tend to form pockets during convalescence. A plastic flap is made and the wound is packed as in the modified operation.

If satisfactory results are to be expected, good postoperative care is imperative. The packing should be removed between the fifth and eighth day. At this time the wound should be thoroughly inspected for deposits of gelatinous masses of fibrin or clotted blood in the hypotympanum, about the mouth of the eustachian tube, and in the sinodural angle. If such deposits are found, they should be removed; otherwise granulations will bridge across, the deposits will be absorbed, and pockets which may become infected will be formed, thus causing a great deal of trouble. In most cases the granulation tissue can be controlled by the use of carefully placed packs of .5 inch iodoform gauze, of caustics, and of small biting forceps. Masses of granulation tissue are especially prone to occur in the floor of the hypotympanum, about the mouth of the eustachian tube, in the sinodural angle, and from the tegmen above to the facial ridge below; they are most troublesome during the first month immediately following operation. Postoperative care must be maintained until the wound has completely epithelialized, a process which usually requires from two months to six months or longer. After healing is complete, these wounds are not self cleansing, and patients require periodic care once or twice a year for the rest of their lives. The importance of such postoperative care cannot be too strongly stressed.

COMMENT

No discussion on this subject would be complete without some mention of the psychologic management of these patients. Many of them present themselves for treatment with a fear that amounts almost to a mania. They have been told of all of the horrible complications that may occur if they are not operated on. In addition they have been warned of such dangers as facial paralysis, fatal hemorrhage from injury of the lateral sinus, and surgical injury to the meninges and brain if they submit to surgical treatment. Most of them are more afraid of an operation than they are of the disease itself with its ever present, potentially fatal complications. When these patients fail to respond favorably to conservative measures, they are entitled to and should have surgical treatment. The dangers of serious complications that come with delay and recurrent exacerbations[4] should be explained to them. However, it is my belief that it is a serious mistake to discuss and magnify the dangers of surgical accidents with such patients.

The mastoid operation, when done by a skilled surgeon during a quiescent period of the disease, is almost without danger. The patient usually leaves the hospital within one week after surgery and in most cases returns to work within two weeks. The operation eliminates almost 100 per cent the hazard of a subsequent fatal complication. A dry ear can be expected in approximately 90 per cent of all cases following adequate surgery and postoperative care.

CONCLUSIONS

All patients with persistent or recurrent infection involving the attic and mastoid cavity that fail to respond favorably to conservative measures should be operated upon. Undue delay may result in serious or fatal complications.

The operation of choice will depend upon the underlying pathologic condition and the hearing. By performing the modified tympanomastoidectomy serviceable hearing can be preserved in selected cases.

In performing these operations, I prefer the more modern technique of the endaural approach and the use of dental drills, burrs, and long shanked curets.

A dry ear can be expected in a high percentage of all cases following adequate surgery and postoperative treatment.

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ABSTRACT OF DISCUSSION

DR. AUGUST J. STREIT, Amarillo: With the advent of the antibiotics the necessity for operation for acute infections of the mastoid has been materially decreased. The number of radical operations (tympomastoidectomy) remains at about the same level as in previous years.

There are still too many chronic discharging ears as the result of poor treatment of acute otitis media. Adequate local treatment combined with adequate systemic treatment should be carried out until the ear is dry. If this cannot be accomplished, a simple mastoidectomy should be performed. By following these procedures the number of chronic discharging ears will be greatly diminished and the hearing of these patients will be at a higher threshold.

I should like to stress again, as Dr. Singleton has so well brought out, that where the indications for operative interference are present, local treatment and antibiotics are of little use. To recapitulate, the purpose of the operative procedure is (1) to remove a dangerous lesion, (2) to improve the hearing, and (3) to get a dry ear. To accomplish this objective it is important to unite the external canal and antrum into one cavity. The otologist should make a meticulous search for the infected cells and remove all the possible overhang; he should not be satisfied with a small opening. Such a procedure will give adequate drainage to the external ear canal. The after treatment is also important. Granulations should be removed as they appear. Before the patient is dismissed the entire wound area should be completely epithelialized.

My experience with the modified tympomastoidectomy has been satisfactory in properly selected cases. The hearing as a rule is better, and a dry ear can usually be obtained.

FOREIGN BODIES IN AIR AND FOOD PASSAGES

Observations on Series of 85 Cases

OLIVER W. SUEHS, M.D., Austin, Texas

SINCE 1897, when Killian[1] removed a bone from the right bronchus by the oral route, the endoscopic removal of foreign bodies from the air and food passages has become a common occurrence, but it still intrigues the physician as well as the layman. In spite of the many excellent articles and monographs on the subject, the diagnosis of foreign body is too often delayed or overlooked entirely by the physician first consulted.

This paper is based on my experiences with the removal of 85 foreign bodies from the air and food passages. The first 33 patients were seen at the Bronchoscopic Clinic of Jefferson Hospital, Philadelphia, and therefore do not represent consecutive admissions but rather cases allocated to me. The latter 52 represent consecutive cases in private practice. Of these, 38 foreign bodies were in the food passages and 14 in the air passages, a ratio of almost 3 to 1.

The age incidence in this series ranged from 4 months to 84 years, with 36 of the 85 patients being 4 years or younger (table 1). Two-thirds of the foreign bodies in the air passages occurred in children 4 years or younger, with the youngest 10 months of age. About half of those in the food passages occurred in adults.

TABLE 1.—*Age Incidence in 85 Patients with Foreign Bodies in Food and Air Passages.*

Age (Years)	No. Patients
0-2	18
2-4	18
4-6	7
6-12	3
Adults	39

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ETIOLOGY

While it cannot be denied that carelessness is the chief cause of foreign body accidents, it must be remembered that little children, especially from 1 to 2 years, instinctively place everything they can into their mouths, and a busy mother can hardly be expected to watch her child closely at all times. However, parents who feed their little children peanuts or who leave open safety pins lying within their reach are not so easily forgiven. It is surprising that these accidents are not more numerous, but, as others have pointed out, probably only a small percentage of the foreign bodies swallowed ever comes to the attention of the endoscopist. In this connection Delaney's[3] report of 41 cases of children in whom various foreign bodies passed through the gastrointestinal tract spontaneously and without mishap is enlightening.

Children often aspirate food or other material held in their mouths while laughing, sneezing, crying, or falling, sucking the object into the airway with a sudden deep inspiration while the protective mechanism of the larynx is off guard.

In adults the majority of foreign bodies lodge in the esophagus and can most often be attributed to poor dentition or to false dentures with an "upper plate" which renders the hard palate insensitive to bones or other objects. Of 39 adults in this series 36 constituted cases of foreign body in the esophagus. Not infrequently an organic stenosis of the esophagus is discovered as a result of a bolus of food lodging proximal to it.

The insane have a tendency to swallow all sorts of foreign bodies. One such patient in this series was admitted to the hospital because of a sewing needle which had become transfixed across the upper orifice of the larynx; a roentgen study revealed fifteen additional pins and needles in the gastrointestinal tract. Such cases are not uncommon.

Stomach contents may be aspirated while a patient is under the influence of a general anesthetic or alcoholic intoxication, although no case of this nature is included in this series. Postoperative atelectasis as a result of mucous plugs or retained secretions also is not included.

TABLE 2.—*Type and Number of Foreign Bodies.*

Bones	20
Meat	9
Nuts, seeds, and beans	14
Other vegetal matter	5
Safety pins (open)	7
Common pins and needles	2
Coins, disks, and buttons	19
Hardware and other metallic objects	6
Dentures	1
Diphtheritic membrane	1
Egg shell	1
Total	85

Bone and meat foreign bodies were all encountered in the adult esophagus. The commercial practice of chopping up, rather than disjointing chickens, has made the chicken bone a more dangerous foreign body. Of the 20 bone cases, 13 were caused by chicken bones. The coins, open safety pins, nut kernels, and other vegetal objects as foreign bodies almost all occurred in small children.

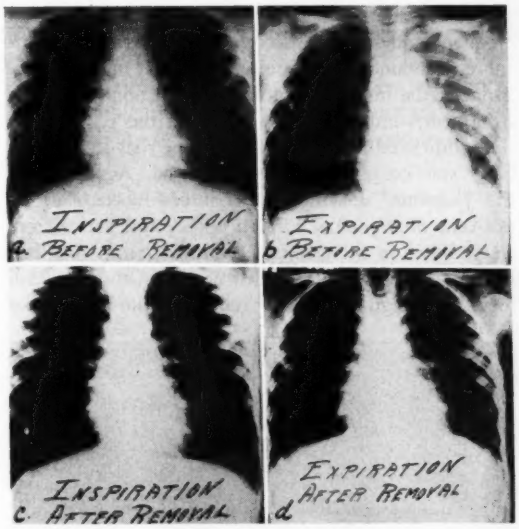

FIG. 1. Roentgenograms of a 4 year old child demonstrating obstructive emphysema of the right lung produced by half a peanut in the orifice of the right main bronchus. The film at the end of expiration before removal of the object (*b*) shows increased aeration of the right lung, shift of the mediastinum to the left, and depression of the right side of the diaphragm. The object was in the bronchus ten days. Roentgenograms *c* and *d* were taken at the end of full inspiration and expiration after removal of the peanut. (Films by Dr. K. Kornblum.)

TABLE 3.—*Anatomic Location of Foreign Bodies.*

Hypopharynx		4
Larynx		5
Trachea		1
Bronchi		15
Right	9	
Left	6	
Esophagus		60
Cervical	41	
Thoracic	14	
Cardiac end	5	
Total		85

SIGNS AND SYMPTOMS

The symptoms of a foreign body in the larynx depend upon the size, location, and length of sojourn of the object. Hoarseness and cough are almost invariably present. A large object may become impacted in the larynx with asphyxia and sudden death, whereas a small one, such as a tack, needle, or grass burr, may produce no dyspnea whatsoever. Sharp objects in the larynx usually cause some discomfort on swallowing.

The symptomatology of foreign bodies in the tracheobronchial tree has been described elsewhere but for emphasis is repeated here. The initial symptoms consist of strangling or "choking" as the foreign body is aspirated, followed immediately by a severe paroxysm of coughing which lasts for a variable period. If the object remains free in the trachea where it can move about, the paroxysms are more frequent and severe; also, wheezing and dyspnea are more pronounced. If it becomes lodged in one of the bronchi, the initial symptoms are commonly followed by a symptomless interval in which the parents and the uninitiated physician may assume that the foreign body was coughed out or swallowed. According to the Jacksons,[5] a symptomless interval occurs in 80 per cent of bronchial foreign bodies and varies from a few hours in the case of a bean or peanut to a few months in the case of a pin or needle. Although small metallic foreign bodies may remain in the bronchi for long periods without producing symptoms, vegetal foreign bodies invariably cause some degree of bronchial obstruction, irritation, and later infection and suppuration.

FIG. 2. Roentgenograms of a 10 year old boy demonstrating obstructive atelectasis of the lower lobe of the right lung and a small amount of pleural effusion caused by complete obstruction of the bronchus of that lobe by a whole peanut. The foreign body was in the bronchus four days. The film taken five days after removal of the peanut (right) shows complete reexpansion of the lobe. (Films by Dr. K. Kornblum.)

In this series of 16 tracheobronchial cases, a positive history was volunteered in all but 1, in which it was obtained only after the diagnosis had been made by bronchoscopic examination. Cough was the most constant symptom, being present in 15, and a wheeze was audible in 12 cases (table 4).

TABLE 4.—*Symptoms on Admission in 16 Cases of Tracheobronchial Foreign Bodies.*

Cough	15	Fever more than 100 F.	10
Wheeze	12	Indrawing	5
Dyspnea	7	Cyanosis	3
Hoarseness	4	Stridor	2

The advice of a physician was sought by the parents promptly in 12 cases and delayed in 4. The record of referral by the physician first consulted was similar, with prompt referral for bronchoscopy in 11 cases and delayed referral in 5. In 4 of those delayed more than one physician was consulted before the patient was referred for bronchoscopy. As a whole, however, the period of sojourn of the foreign body for the entire group was relatively short, the longest being fifteen days. In one-half of these cases the foreign body was removed within forty-eight hours or less.

A foreign object in the esophagus produces varying degrees of dysphagia. In the case of long, pointed objects there is usually pain on swallowing, which may be referred to the back between the scapulas. If there is complete high obstruction, a cough caused by overflow of secretion into the airway is a common symptom. Because of the constant discomfort, patients with esophageal foreign bodies usually seek relief early.

Physical Signs

As McCrae[6] pointed out in his classical Lumleian Lectures in 1924, the physical signs of a foreign body in a bronchus may vary greatly from hour to hour and depend upon the nature, size, and shape of the foreign body; irritation, inflammation, and secretions; and shifting of the object.

Vegetal foreign bodies such as nuts, seeds, and beans usually produce obstructive emphysema with unilateral limitation of expansion on the affected side, absent or diminished breath sounds, and hyperresonance to percussion. These signs are the result of an ingress of air around the foreign body into the affected lung on inspiration and a ball-valve obstruction preventing the escape of air on expiration as the bronchus contracts.

If the object is more or less globular or if it has been present long enough to produce considerable mucosal swelling, the bronchus may become completely occluded, giving rise to the signs of atelectasis: dullness to percussion, absence of breath sounds, and a shift of the mediastinum toward the affected side. A small metallic foreign body may produce no appreciable obstruction or irritation and hence few or no signs.

While uncomplicated foreign bodies in the thoracic esophagus usually produce no physical signs, those that lodge in the cervical esophagus are often associated with tenderness to pressure over the cricoid cartilage or upper trachea. This is particularly true of bones and other pointed objects in the upper esophagus. Since 41 of the 60 esophageal foreign bodies in this series became lodged at or just below the cricopharyngeus, tenderness constituted an important sign. In several instances it led to the finding

and removal of a spicule of bone in spite of a negative roentgen-ray report.

The observation by mirror examination of secretion in one or both pyriform sinuses should suggest esophageal obstruction of some degree.

Roentgen Signs

The importance of a careful roentgen examination cannot be overestimated, but its value depends largely upon the skill and experience of the roentgenologist in interpretation of foreign body roentgenograms. Obviously, an opaque foreign body in the air or food passages is readily recognized, but diagnosis of a nonopaque object in the trachea or bronchus requires a careful fluoroscopic and roentgen-ray study of the changes that occur in the lungs during the respiratory cycle. Films should be made at the end of inspiration and at the end of expiration.

Obstructive emphysema was first described by Iglauer[4] in 1911. The mechanism by which foreign bodies produce emphysema in the bronchi was extensively studied and further explained by Manges.[7] Emphysema is common when a nut kernel or other non-opaque object produces a ball-valve obstruction and air can enter but cannot escape from the lung. Fluoroscopic and roentgen-ray findings are most marked at the end of expiration and consist of (1) increased aeration of the affected lobe or lung as a result of the trapped air, (2) depression of the diaphragm on the same side, (3) displacement of the heart and mediastinum toward the sound side, and (4) compensatory emphysema of the sound lung. Figure 1 demonstrates a case of obstructive emphysema produced by half a peanut in the orifice of the right main bronchus.

When a bronchus has become completely obstructed, of course, the signs are those of atelectasis. Pneumonitis and drowned lung are observed in patients in whom the foreign body has had a longer sojourn with resulting secondary infection.

In the group of patients with nonopaque foreign bodies in the trachea or bronchus, obstructive emphysema was demonstrated in the majority. Atelectasis of a lobe occurred in 3 cases, and peribronchial infiltration with beginning pneumonitis was reported in 1. Figure 2 illustrates a case of obstructive atelectasis of the lower lobe of the right lung and a small amount of pleural effusion caused by a whole peanut.

The diagnosis by roentgenogram of esophageal foreign body is less difficult, but good lateral films are essential. A slender spicule of bone is often overlooked and, if hidden in the folds of the cricopharyngeus, may escape detection even with barium.

DIAGNOSIS

The presumptive diagnosis of bronchial foreign body is the responsibility of the physician first consulted, most often the family physician, pediatrician, or internist. With a positive history, cough, wheeze, and any abnormal physical signs, diagnosis should be simple. If the patient is first seen during the symptomless interval but the history is suggestive, the responsibility of diagnosis should be shared with the endoscopist. A fluoroscopic and roentgen-ray study will usually confirm the diagnosis and should always be made. However, a negative roentgen-ray report is not infallible, and with a positive history and physical examination, a bronchoscopic examination is indicated.

As a general rule, a foreign body that has become lodged in a bronchus does not constitute an emergency; the patient should be examined carefully and preparations made for removal of the object under optimal conditions. A foreign body in the trachea, on the other hand, may produce serious dyspnea or become jammed in the larynx, causing sudden asphyxia. Another dangerous possibility before or during attempted removal of a foreign body is the shifting of the object from the previously obstructed bronchus to the sound bronchus with sudden asphyxia unless removal is prompt. With this in mind, the physician should proceed with bronchoscopic removal as soon as possible after studies have been completed.

Any case of so-called "unresolved pneumonia," particularly in a young child, should have the benefit of bronchoscopic examination, for a previously overlooked nonopaque foreign body may be discovered as the etiologic factor.

The diagnosis of esophageal foreign body is made by the history, symptoms, lateral films of the neck and chest, fluoroscopic study of the swallowing function with barium when indicated, and esophagoscopy.

ENDOSCOPIC FINDINGS AND DIFFICULTIES

All bronchial foreign bodies in the series were vegetal substances with the exception of the case of endogenous diphtheritic membrane, and all produced from slight to moderate degrees of inflammatory reaction in the bronchial mucosa. The local and systemic reactions were no worse in patients who had aspirated a peanut than in those with a bean or pecan kernel in a bronchus. One of the latter type of patients developed an atelectasis two days after removal of the foreign body as a result of the formation of a fibrinous membrane in the affected bronchus. This atelectasis cleared promptly after a second bronchoscopy for removal of the exudate.

The most severe tracheobronchitis was observed in a patient who had aspirated pieces of raw carrot. There was marked mucosal swelling and fibrinous exudate in both bronchi. A small piece of carrot was found in the bronchus of each of the lower lobes.

Fragmentation of the nut kernels and "stripping off" at the narrow subglottic larynx were the two chief technical difficulties encountered in removal of the foreign bodies. As Richards[9] so ably described the problem, "Attempts to grasp the object delicately may mean an insecure hold, while more forcible application of forceps may break a large nut into several smaller ones."

Fragmentation occurred twice with peanuts and once with a portion of pecan in this series. In one of the patients having a whole peanut in the right main bronchus, three bronchoscopies were necessary to remove all the fragments. In another in which a whole peanut obstructed the right bronchus, the nut became divided into its two halves, one half shifting into the previously unobstructed left bronchus, where it was promptly seized and removed. Momentary loss of the foreign body by "stripping off" at the larynx also occurred three times, all of these being large objects in small patients. This occurred with a swollen bean, a grain of corn, and a large piece of diced raw carrot.

As previously stated, 41 of the 60 esophageal foreign bodies became lodged in the cervical esophagus, most often at the level of the suprasternal notch, just below the cricopharyngeal pinchcock. In this location the foreign body usually produces considerable discomfort and the patient seeks relief relatively early. The longest sojourn of a foreign body in the cervical esophagus in this series was in the case of a 68 year old woman with a large chop bone just below the cricopharyngeus which remained for seven days. There was a considerable amount of edema of the esophageal mucosa and marked tenderness at the root of the neck.

Another patient 60 years of age harbored a chicken bone in the cervical esophagus for four days after he had been given a negative roentgen-ray report. On admission his temperature was 102 F., probably the result of periesophagitis. Marked spasm was encountered at the cricopharyngeus and there was moderate mucosal swelling at the site of lodgment just below this level.

By contrast, a 10 month old infant remained symptom-free for thirty-five days with a round paper clip in the lower end of the esophagus. At removal there was only a mild esophagitis at the site of lodgment. A barium study after removal of the object revealed no evidence of congenital abnormality or spasm at the hiatus.

The unexpected lodgment of food particles or foreign objects in the thoracic or cardiac esophagus of adults should always arouse suspicion of an organic lesion of the esophagus. A cicatricial stenosis was observed to be the cause of lodgment in 4 cases. Two patients were found to have a congenitally short esophagus with stricture at the esophagogastric junction, and still another had a hiatal hernia.

It is undoubtedly true that the removal of a foreign body from the esophagus is more hazardous than the removal of one from the tracheobronchial tree because the esophagus is a thin-walled tube that can easily be perforated. However, in my experience, the technical difficulties are not as great because the physician does not have the problem of small forceps-space, fragmentation, and shifting of the foreign body. The physician must be extremely cautious in the removal of sharp objects, such as open safety pins and spicules of bone, to avoid "over-riding."

ANESTHESIA

No anesthesia was used in the infants or children in this series, with the occasional exception of a small quantity of 1 per cent Larocaine or Pontocaine instilled through the bronchoscope to overcome objectionable coughing in patients having bronchial foreign bodies. The adults also received only topical anesthesia with three exceptions, when a general anesthetic was given to facilitate the removal of a large bone from the esophagus.

General anesthesia for esophagoscopy in small children is extremely hazardous because the trachea is so easily compressed by the relatively large tube in the esophagus. This danger is minimal in adults, and the relaxation the anesthetic affords makes the removal of long, sharp or jagged objects much safer with less danger of perforation.

I have had no experience with general anesthesia in the removal of bronchial foreign bodies, but others have used it with apparent safety. Phelps,[8] who has had a rather large experience, has concluded that a general anesthetic should always be used in children except when cyanosis or lung abscess is present. Richards[9] has used Avertin anesthesia to advantage. In general, the operator should choose the anesthetic best suited to the case and one which will render the procedure safest in his hands.

COMPLICATIONS

Foreign Bodies in Air Passages.—Vegetal foreign bodies are most prone to set up an acute laryngotracheobronchitis. This alone or in addition to the slight trauma incurred by instrumentation may result in sufficient subglottic swelling to produce obstructive

dyspnea requiring tracheotomy, particularly in children of 2 years and younger. Tracheotomy was performed on 2 patients 2 years old, both of whom had aspirated raw carrot. In one the tracheotomy had been performed by the referring physician. In the other tracheotomy became necessary twenty-one and a half hours after the removal of a large piece of carrot measuring 2 cm. by 8 mm. by 3 mm. No complications were incident to the tracheotomies.

Much has been written to warn against high tracheotomy and the subsequent danger of laryngeal stenosis. The physician should exercise even more caution against making the tracheal opening too low, particularly in infants and young children, thus producing or inviting mediastinal emphysema and pneumothorax, which are usually fatal. The danger of mediastinal emphysema is reduced by inserting a bronchoscope before doing a tracheotomy.

With regard to sequelae, Clerf[2] has emphasized that every patient with a bronchial foreign body should be considered as a potential case of bronchiectasis, particularly when the object has had a long sojourn. Accurate estimates of the incidence of bronchiectasis as a complication of a foreign body are impossible to obtain because of the difficulty in tracing patients and getting them to return for bronchographic studies. A questionnaire with reference to bronchopulmonary symptoms was answered by two-thirds of the parents. Of these, all children were in good health and symptom-free with the exception of one who had had two attacks of "bronchitis" within a year after the removal of the foreign body.

There was 1 death in this series of 85 cases, and it was probably unavoidable. This case is reported below:

> J. L. B., aged 10 months, was unconscious and moribund when admitted directly to the operating room with a history of gradually increasing respiratory obstruction and cyanosis during the preceding five hours. A positive history of foreign body was not obtained prior to bronchoscopy, but the diagnosis was strongly suspected. The infant was extremely cyanotic and made only an occasional, feeble "squeaking" inspiratory effort.
>
> Respirations ceased entirely as the bronchoscope was inserted. A swollen pinto bean was encountered midway down the trachea, completely filling the lumen and too large to extract through the glottis in toto. A portion of the bean was removed in several pieces until the bronchoscope could be passed beyond the remainder, but artificial respiration and oxygen through the bronchoscope failed to revive the patient.

It is possible that a swiftly-done tracheotomy after pulling the bean up to the larynx might have saved the patient, but the time which elapsed in removing a portion of the bean was probably no longer than would have been required in doing a tracheotomy.

Foreign Bodies in Food Passages.—The only complication incident to the removal of 60 foreign bodies from the esophagus was emphysema of the neck and upper mediastinum in 1 patient after removal of an impacted bolus of meat from the lower esophagus. The white blood cell count remained normal and the patient's temperature did not exceed 99 F. The air was rapidly absorbed without the development of infection. No perforation could be demonstrated by study of the swallowing function on the fourth postoperative day, but a small leak had apparently occurred at or above the level of the cricopharyngeus, where considerable spasm had been encountered.

There were no fatalities in this group.

SUMMARY

A series of 85 cases of foreign body in the air and food passages is discussed from the standpoint of etiology, location, symptoms, diagnosis, and endoscopic findings.

Fragmentation of nut kernels and "stripping off" at the subglottic larynx were the two chief technical difficulties encountered.

Obstructive dyspnea requiring tracheotomy occurred in 2 cases of bronchial foreign body. One of these had been done by the referring physician.

Bronchiectasis, the most common sequela of bronchial foreign body, is less likely to occur if the diagnosis is made early and the bronchial obstruction promptly relieved.

Esophageal complications were limited to localized traumatic esophagitis and 1 case of emphysema of the upper mediastinum which subsided without mediastinitis.

One fatality occurred in the group of 85 cases, a mortality rate of 1.17 per cent.

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PRACTICAL AIDS FOR THE REFRACTIONIST

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LITTLE which is original may be added to the knowledge of practical aids in refraction. There does appear to be a need, however, to emphasize the means whereby the medical refractionist may elevate his position to a higher plane than that of a "spectacle fitter." Much may be gained by his accepting each case as a medical problem; nevertheless, the service fundamentally sought by the patient is a comfortable pair of glasses, a service best met by a number of procedures in the refraction. A few practical aids are suggested here for the examination and selection of the correction best suited for the person's needs. The ophthalmologist should leave little advice to be given by the professional dispenser, and the final checking of the glasses should be by the physician.

HISTORY AND OBSERVATION

Every patient has an individual problem which he expects the doctor to solve. Specifically, those who visit the ophthalmologist believe that their eyes have something to do with an illness or that they need to see more comfortably and clearly. In order that the ophthalmologist may act as a clinician, he should be able in the first brief glance at the patient to gather pertinent information about the patient's general health. The arrangement of the refraction or consultation room should be such that the general appearance of the patient can be readily appreciated. His posture, gait, color, approximate weight, and involuntary movements should be quickly noted by the ophthalmologist as the patient enters the room and is being seated. If at this first meeting a patient is rushed in being seated, he may become ill at ease with the subsequent result that parts of the subjective examination are unsatisfactory. In the examination of small children who may have unpleasant memories of a pediatrician clothed in a white jacket, the ophthalmologist may find it an aid to doff the conventional jacket or coat.

A brief history taking period offers an interval for the patient to become acquainted with the ophthalmologist and his strange surroundings which may create curiosity and, in some patients, fear. A stereotyped quiz sheet may be of value in collecting statistics, but it would seem more logical to fit the questions to each person. Needed information can be gained by discussion of eye habits. Does the patient read in bed, in a chair, or at a desk? When and where is the greatest demand placed upon the eyes: at home, work, or play? It is also well to inquire if the patient is receiving care from another physician or taking medications such as atropine, sulfonamide drugs, or any of the estrogens. The ophthalmologist should never forget to take the past history and family history, as they also must be properly evaluated.

EQUIPMENT

First impressions are frequently lasting, and unfavorable ones often prevent the successful end to an undertaking. For this reason the refraction room has been added. It has been developed by certain principles with no effort to standardize appearance; however, the individual refractionist sets up the refracting range according to his own idea of practical efficiency.

In many instances the dark refraction room has a foreboding appearance. To minimize this, the appearance of the room should be little different from the average room in a home. The walls should be painted a light neutral color with a dull finish. A window is desirable and should be curtained so that the major part of the light can be excluded by an easily operated drawstring mechanism. Where feasible the window should offer a distant view, in which few signs or billboards would be found useful. Before such a window the old glasses may be compared with the proposed new ones, thus preventing the embarrassment of having the patient state there is no difference between his old glasses and the new ones. There is the additional advantage that color changes in the iris or face are more readily ascertained with daylight than with artificial light.

A general, artificial illumination of the refracting room will be of aid in studying the patient as he is being seated. This illumination is best derived from fixtures which afford both direct and indirect lighting. Properly shaded and louvered fixtures give warmth to the room and increase the visual efficiency of the ophthalmologist while he is taking a history and obtaining information about the patient's general appearance. Except for one light over the patient units arranged to be turned off individually can be placed on one switch near the examining chair. The light over the patient should be shaded, subdued, and easily adjusted for lighting the patient's face and the instruments. This type lighting is especially advantageous for the refractionist who must deal with the ever annoying presbyopia, as manipulation of the refractor or the trial frame and test lenses are often hampered by improper illumination.

The refractionist will enhance the value of his services by having lighting units which are examples of proper illumination. Under such lighting the near

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point of accommodation should be measured and the best light intensity for near work such as reading and sewing demonstrated. One conventional illuminating unit should be placed over the physician's desk and another near the refracting chair. It is also advisable to have available a proper balanced fluorescent fixture. A demonstration of the value of good lighting will aid in improving the patient's visual efficiency for a specific task which is his livelihood or a great part of his pleasure.

In order that information concerning illumination requirements can be obtained, frequently a light meter may be lent to the patient with instructions on how to measure the foot candle power under which he intends to use his eyes. There is better accommodation under good illumination, making it possible to use weaker lenses giving larger fields of vision. Investigation of the type of illumination used by the patient will avoid the alteration of lenses which are correct but which are not best for the work he must do.

Unfortunately test charts and the illumination of these charts are left to the individual refractionist. In spite of uniformity in the size of Snellen's test letters, proper illumination has not been uniform. For this reason I suggest that only projection lanterns be used. A diaphragm in the lens system of the lantern allows for accuracy in recording visual acuity at various intensities without altering the quality of the light. In most instances subdued illumination of the room will not interfere with the efficiency of the projection lantern, and skiascopy and ophthalmoscopy are facilitated in a room not too dark to see the lenses in the trial case or the head of the ophthalmoscope.

REFRACTION ROUTINE

Early in the career of the refractionist he develops an established routine. Variations in routine can be added or deleted to increase efficiency and expedite the care of the patient. Speed is acquired as familiarity with the routine increases. It would be presumptious indeed to outline such a procedure; however, the following pointers can be stressed as aids for the refractionist:

1. The central visual acuity for each eye both for near and distance should be obtained with no more than a single shield, exercising care not to put any pressure on the bulb; then the visual acuity with the old glasses, if available, may be measured.

2. A direct light should be placed upon the patient's features to ascertain clues to gross defects of the pupils and motility of the eyes.

3. Careful adjustment of the trial frame or refractor without lenses on the patient's face will aid in proper centration for pupillary distances.

4. When a tentative correction of the refractive error has been ascertained by a manifest refraction, these lenses are placed before the eyes and a routine check of the external muscles with the Maddox rod is conducted. Then the near point of accommodation for the two eyes together and individually is obtained. The near point of accommodation is defined as that distance where the test type remains clear.

5. After a routine ophthalmoscopic study, the tension should be measured by palpation and by tonometer if the ophthalmologist is not convinced it is normal.

6. If a static refraction is to be done I suggest that it not follow the use of the tonometer but when the patient returns for further study.

7. Postcycoplegic examinations are mandatory in order to find the spherical correction which will best serve the patient. Also at this time the axis of the cylinder may be checked and any necessary change made.

8. Before the lenses are removed, the muscle balance should again he checked with the Maddox rod. The muscle balance originally obtained may be referred to and a prismatic correction for vertical deviation or decentration of lenses for lateral imbalances considered.

SELECTION OF LENSES

Mechanical Aids.—The refractionist may have his work go for nought if the patient is unable to adjust the lenses before the face or to judge what the optician has done for him. In most instances the optical center of the lens must be placed opposite the pupillary center. It happens, however, that the bridge of the nose may be closer to one optical pupillary center than the other. At present there are so many different types and styles of frames that the ophthalmologist finds it almost impossible to evaluate what is best except by adhering to optical and pupillary centering of the lenses. The odd shapes in the conventional frames may not be worn by every person; therefore, it is easier to instruct the patient what is most suitable if he is to be sent to the optician. Some frames will not permit adjustment or the successful mounting of bifocals. If the ophthalmologist believes that some difficulty may be encountered, the pupillary distances should be properly recorded on the prescription with a note concerning any apparent asymmetry of the face.

When the strength of the lens is great or the correction complicated, the trial frame must be adjusted so that the lenses in the trial frame will be in the same focal plane as the finished glasses. This may be best accomplished by measuring the distance from the posterior face of the lens in the trial frame cell to the closed lids, adding the approximate measure of lid thickness to compensate for the thickness of the lid. A blank disk with a horizontal hole in the center large

enough to accommodate a millimeter rule will give an accurate measurement. This measurement, together with the angle of tilting, should also be recorded on the prescription, especially when the patient is sent to a manufacturing optician. As an added precaution, the trial lenses mounted in the frame may be placed on the Lensometer and a verification of lens strength made.

Presbyopia.—During this era of industrialization the refractionist can render a great service to his patients if he understands the demands of specific visual tasks on the eyes. As the patient grows older the accommodative range decreases and he requires lenses for exact focal points so that his work may be more satisfactorily done. A simple way to ascertain working distances for the patient is the tape measure or yard stick. By such means can it be determined whether a single vision or bifocal lens will serve best.

In presbyopia the ophthalmologist must be able to evaluate the need for glasses and to judge the personality of the patient to make him happy and to render a needed service. False ideas can be disproved and the advantage of various types of glasses pointed out during the examination, provided the ophthalmologist understands the individual problem of each patient. It is easily understood that the requirements for the focal length of the glasses given a carpenter must be different from those given the desk worker. The dentist and otologist must have glasses with a shorter focal length than must the music teacher. Three essentials for making patients comfortable are that their exact working distances be measured, that the optical centers of the lenses be adjusted for close work, and that the illumination be adjusted. In many instances the hyperopic person will be made more comfortable by decentering the lenses inward slightly, while the myopic patient will tolerate decentering outward.

Demonstration of the proposed lenses in the office will prevent regrinding and will acquaint the patients with the limitation of glasses, especially when bifocals are needed. A lens ring has been made with a small segment 18 mm. in diameter of the proposed lens strength fastened to one side, the remainder of the ring being free of any lens. With these rings inserted in the cell of the trial frame containing the distance correction, the patient obtains some semblance of what can be expected from the bifocal. The additional segments come in .25 diopter differences up to four diopters.

A few minutes spent with the trial frame on the patient's face will often aid both doctor and patient to determine the best distance for the patient's tasks. The same lens ring segments may be inverted so that their use for tasks above the level of the horizontal can be demonstrated, such as may be needed for the librarian and/or switchboard operator. In every instance the adaptability of the individual patient should be studied. In the older presbyopic patient it may be found advisable to remove the cylinder from the correction.

As a final warning in prescribing bifocals, a few suggestions are offered. Bifocals should be deferred as long as possible even to the use of a compromise glass which may blur the vision slightly at a distance. The greatest care should be used in seeing that the correction for the older patient is best for his work, as he has no accommodation. The use of special type segments for specific tasks should be remembered. Teachers, preachers, public speakers or those who are handicapped by pulling off their glasses will do better with a bifocal, even with plano for distance.

Multiple Vision Lenses.—Every refractionist is confronted with the problem of patients who must have something better than the ordinary bifocal. A partial solution is offered for these persons in the multiple vision special vocational lens. The most common are the double segment lens and the trifocal; each has its specific indications.

The double segment lens has a segment above and below separated by the distance correction. The top segment has a focal length of approximately one-half to two-thirds that of the lower. This type is especially useful for sculptors, painters, or persons who must work at tasks without a constant plane because of varying distances.

The term trifocals is used to describe a lens which has a sequence in the increase of strength with the distance correction above the immediate segment and the close or reading segment below. This lens is best used when the accommodation lost requires at least a plus 2.00 sphere add for close work. Optical companies have found that the intermediate segment should be approximately two-thirds the strength of the reading or lower segment. When the intermediate segment is greater than 6 mm. in width, the reading segment is so far down that it loses some of its usefulness. Filing clerks, stenographers, architects, and those having work over an area the size of a drawing board will derive much benefit from the trifocal type lens. For demonstration a trifocal trial lens in a conventional trial frame may be placed before the patient. The patient should also have a conventional pair of glasses such as the regular bifocal to avoid confusion.

Colored Lenses.—The use of tinted and colored lenses should be based upon more than the patient's judgment and the optician's salesmanship. As a rule there are few indications for a tinted lens. However, the average patient believes that a tint will relieve him of glare, which requires the explanation that glare is not eliminated by any lens.

In order to impress the patient with what may be expected, the ophthalmologist must remember the

definition of glare as misplaced light. It is then easy to explain that the color of the lens will only reduce the light entering the eye, in no way removing unpleasant misplaced light. A pair of tinted lenses mounted in a frame so they can be placed before the eyes with conventional illumination is a convincing test. In the majority of instances the patient will reject the tint.

Colored lenses are indicated when much of the patient's activity is outdoors under high intensities of sunlight. He must be warned that colored glasses worn indoors are of no value and will probably hinder him; thus there is need for an additional pair of clear glasses.

FINAL CHECK

At the time the prescription is written the physician must anticipate the difficulties which the patient is likely to encounter with his first pair of glasses or if radical changes must be made in the strength of the lenses. The advantage and limitations of glasses should be explained and the need for accurate adjustment of frames and placing of lenses demonstrated, especially for patients who must wear strong spheres or cylinders. The presbyopic patient needs reassurance that the loss of focussing is in the normal course of advancing years and he should be warned that eventually he will experience a "dead space" which will remain throughout life, for which no remedy is known.

When the patient returns for the final check of the finished glasses, he should not be dismissed with "How nice you look in glasses." If the proper strength has been verified by the Vertometer reading, the physician should see that the frames fit properly and, if new, are relatively fashionable. By fitting is meant that pupillary centers should be opposite optical centers and adjustments for any facial asymmetry should be made. A check can be made with the loose Maddox rod to see if any change in muscle balance occurs with the finished glasses. If a cylinder is present, the frames should be tilted sideways to see if any alteration in vision is obtained. Final instruction concerning the time, place, and need for the finished glasses furnishes practical aid for the patient and assurance by the refractionist of a job well done.

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ABSTRACT OF DISCUSSION

DR. R. K. SIMPSON, Kerrville: Dr. Thomas's presentation is instructive and of practical value to refractionist and patient. An "aid" in this instance may be interpreted as any device or procedure which may promote accuracy and expedite the examination.

I agree with Dr. Thomas that there is a need for the refractionist's position to be on a higher plane than that of a "fitter of spectacles." Nonmedical refractionists cheapen the examination by giving the patient the impression that the ocular examination per se is not worthy of a fee. It is indeed unfortunate that in too many instances the layman, not appreciating the training and experience required for a complete ocular examination, assumes the procedure to be by trial and error. If the estimate of refractive error required a little "blood letting," the patient might have more respect for the prescribing of spectacles.

When the intelligence of the patient warrants, I believe that it would be helpful to explain what is being done and why, what final result is expected, and why the examination is a physician's problem. If a cycloplegic is used, its purpose and necessity should be explained carefully to the patient or, in the case of a child, to his parents. Frequently a patient with early presbyopia, genuinely alarmed by his difficulty, is convinced that his trouble is serious and progressive nature and may terminate in blindness. He may be reassured by an explanation of the physiologic factors involved and the reason he now has to have "outside help" to do what heretofore he has done for himself.

Checking the distance from the anterior surface of the cornea to the lens in the trial frame is important where the lenses prescribed are of high spherical value as in extreme myopia and aphakia. At least one of the more recent trial frames is provided with a scale along the temple piece that materially facilitates this determination.

As to bifocals and trifocals, Dr. Thomas has emphasized that the desirable end result is a satisfactory lens for the patient in his daily routine. The ophthalmologist must consider the patient's vocation, reading habits, and so forth in advising bifocals, particularly for the first time and the type best suited for the individual patient should be prescribed. In my opinion where a patient has already worn bifocals, it is safer to prescribe the type to which he is accustomed, as alteration in the size, shape, and position of the reading segment in many instances will be annoying.

Particular care must be taken in prescribing trifocals; the refractionist should be convinced that an indication exists for them and that they will be helpful. They are expensive and extremely annoying to some patients. There is occasionally an urgent need for the type of trifocal with one near segment above and one below the correction for infinity in occupations such as physicians using the head mirror and aircraft pilots with overhead instrument dials.

A few simple appliances in the refraction room are adjuncts to the trial frame, trial lenses, test charts, and retinoscope, such as the Prince rule (or any accommodation rule), pinhole disk, and stenopaic slit; they are often disregarded perhaps because of their simplicity. I have learned to keep available for middle aged and elderly patients a telephone directory and ordinary needles and thread. So often elderly women may observe the near vision card with indifference or impatience but are concerned whether or not they can thread a needle easily with their new correction.

I would like to suggest that every ophthalmologist in dealing with patients who require correction for errors of refraction consider the standard method for appraisal of the loss of visual efficiency as approved May 26, 1925, by the House of Delegates of the American Medical Association. The A.M.A. charts may be used or the Snellen charts may be converted to a percentage loss equivalent. The fractions expressed by 20 over 40, 20 over 100, and so forth are more or less meaningless to the patient, but a visual efficiency of 50 per cent correctible to 100 per cent is understandable. Too often if told he has 20/40 vision in one eye correctible to 20/20, he will reduce the fraction 20/40 to interpret that without his correction he has only 50 per cent visual efficiency. Such of course is not true; with a 20/40 vision there is a visual efficiency of 83.6 per cent. A visual acuity of 20/100 actually means about a 50 per cent loss of vision.

TREATMENT OF MYOCARDIAL INFARCTION

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STATISTICALLY, the prognosis of acute myocardial infarction is generally good. The mortality rate, as determined in several large series of cases, varies from 8 to 25 per cent.[3, 6, 8] Although this is a relatively low mortality rate for a disease having such potential dangers, there is great difficulty in making predictions as to the outcome in any individual patient. Most physicians have observed patients who they felt were sure to die from their attacks, only to see them recover. Other patients thought to have excellent prognoses have made sudden demises as a result of fatal arrhythmia, embolism, or a second infarction. As far as prognosis is concerned, therefore, the physician must be extremely cautious in his discussion with the patient's family. Out-patients must be considered individually and must be given diligent care, regardless of how mild the attack or how small the infarct may seem to be. In other words, the prognosis is always grave, regardless of the clinical impressions.

The chemical and anatomic make-up of the individual patient has much to do with determining prognosis. These factors may be inherited or acquired. Jesse Carr,[2] formerly pathologist in the coroner's office in San Francisco, has studied a large number of patients dying of coronary artery disease. His studies indicate that practically every person has a predominantly left or a predominantly right coronary circulation. This fact plus variations in collateral circulation (factors that may not be predetermined) profoundly influence the outcome in every case. Collateral circulation varies greatly, and Carr[2] has described three types: (1) anatomically normally balanced or equilateral coronary circulation, (2) congenital anomalous collateral circulation (rich or poor), and (3) acquired collateral circulation (rich or poor). These variations comprise the unpredictable anatomic background for recovery from infarction of the myocardium.

Approximately 75 per cent of all cases of myocardial infarction are due to thrombosis,[1] whereas 23 per cent are due to occlusion of the artery without thrombosis. The remainder are due to embolism or narrowing of the coronary ostiums by syphilis. Therefore, coronary atherosclerosis forms the essential pathologic background for myocardial infarction. Atheromas occur as a result of deposition of cholesterol esters caused by abnormal cholesterol metabolism. Such changes occurring in the arterial system of the heart influence nutrition of the heart muscle. Thus, in the person with this inherent defect it would be expected that coronary artery disease would occur earlier in life and be more extensive than in those with normal cholesterol metabolism. Here, then, is the more or less predictable chemical background affecting recovery from myocardial infarction. The characteristic changes of atherosclerosis may involve the entire coronary system or there may be a solitary plaque, and these variations will determine the extent of infarction as well as the recuperative capacity of the heart muscle.

Clinical observation of a patient with acute myocardial infarction reveals a person who is obviously ill—he is pale, sweaty, clammy, apprehensive, mildly cyanotic, usually dyspneic, and complaining of pain. The story of the patient from his family is that he was well one minute and sick the next. The train of symptoms listed above closely follows the sudden onset of substernal pain. The physiologic and pathologic sequence accompanying these dramatic events may be easily traced. A diseased coronary artery has become occluded. An area of ischemia appears in the myocardium. Pain immediately ensues as a result of the ischemia. Shock rapidly supervenes as a result of diminished cardiac output and reflex splanchnic dilatation. Splanchnic dilatation acts as a protective mechanism in an effort to reduce the work load of a damaged myocardium. The myocardium becomes more irritable as a result of anoxia caused by diminished blood supply. If the conduction system is involved, it may bring on the dangers of disturbing or even fatal arrhythmia.

Within a few hours after the initial shock of coronary occlusion, the infarcted area becomes infiltrated with leukocytes. The necrotic tissue is promptly phagocytized, causing characteristic febrile reactions and the formation of a sterile abscess. Soft granulation tissue grows into the infarcted area to replace the lost muscle fibers; in about six weeks this forms a soft scar which with time becomes a firm fibrotic scar. The elevated temperature, increased sedimentation rate, and leukocytosis all occur probably as a result of the absorption of the products of protein breakdown and phagocytosis of the necrotic muscle.

If the infarction extends to the epicardium, pericarditis results. Friction rubs, so seldom heard, are the result of this process. Continued chest pain is often due to the pericarditis. If the infarction ex-

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tends to the endocardium, mural thrombi may form and be a source of fatal embolism. During the stage of healing prior to the stage of fibrous scar formation, additional strain on the heart may bring about rupture of the heart or papillary muscle or an aneurysm of the heart wall. There is, too, the ever present threat of heart failure of the left and/or right side.

TREATMENT

The question always arises as to when to hospitalize these patients. This should be done at once if adequate ambulance transportation is promptly available. In many cases these attacks occur on the street, in places of business, and so forth. Often the physician is called by a member of the family stating that the patient is already on his way to the hospital. If he has not left for the hospital, the ambulance is sent with instructions to begin oxygen immediately and await the doctor's arrival. Routinely, morphine and atropine are given intravenously. All effort is made to relieve pain and combat shock before moving the patient. This may take a few minutes or several hours. Physical examination should be limited to whatever is necessary to make the diagnosis. Oxygen should be continued until all pain, shock, cyanosis, and dyspnea have been relieved.

Complete physical, mental, and emotional rest are required from the onset, even if the diagnosis is only suspected. For the first few hours, 100 per cent oxygen should be administered by the BLB mask with a change later to the nasal catheter or preferably to the oxygen tent. The tent will give up to 60 per cent oxygen concentration, whereas with the nasal catheter approximately 48 per cent may be expected. Oxygen should be given to most patients with acute myocardial infarction since all have some local anoxia and varying degrees of anoxemia. Physiologically, increased oxygen saturation decreases respiratory effort, reduces the heart load, and aids in localizing the infarct, as well as improving the nutrition of the heart muscle.

In relief of pain, morphine is the drug par excellence, and the physician should not hesitate to give it up to 1 grain intravenously for prompt and often life-saving pain relief. For those who do not tolerate morphine, Dolophine, Demerol, or Dilaudid may be used. Relief of pain is essential to the control of shock, and persons in pain can tolerate relatively large amounts of morphine. Patients in deep shock get too slow response to morphine given subcutaneously because the circulation is inadequate to pick it up quickly. As the systolic pressure rises and sweating ceases, morphine should be given subcutaneously as often as necessary to keep the patient free from pain. Barbiturates should be used to promote rest. Phenobarbital, ¼ to ½ grain every four hours, usually is sufficient.

Gilbert[5] at Northwestern showed rather conclusively in animals that atropine was of distinct value in reducing the mortality and morbidity from acute myocardial infarction. Not only did it relieve reflex arterial spasm due to the infarction, but arterial spasm caused by morphine as well. By depressing the vagus nerve, it thereby reduces the chance of arrhythmia. He recommended 1/75 grain (54.2 mg.) intravenously immediately and smaller doses subcutaneously or sublingually at from three to four hour intervals for twenty-four hours after all pain disappears.

Synthetic epinephrine derivatives, such as Neosynephrin and Paredrine (10 to 20 mg. intramuscularly), are of value in combating shock. These drugs, especially epinephrine and ephedrine, have the distinct disadvantage of increasing myocardial irritability and therefore the danger of ventricular tachycardia and fibrillation. Paredrine and Neosynephrin are much less likely to encourage this danger and have the advantage of causing venous constriction, thereby raising the blood pressure. The majority of patients do not require these drugs and they should not be used routinely. Caffeine sodium benzoate can be used for the same purpose and is certainly less dangerous although not as effective.

Papaverine, 1½ grains (100 mg.) intravenously or intramuscularly, is of value in relieving pain and reducing myocardial irritability, but since it is a vasodilator and has a tendency to lower blood pressure, it should be used only in selected cases. When the period of shock is over, papaverine should be given orally in doses of 3 grains every four hours for the first five to eight days as a coronary dilator. Some advocate the parenteral use of plasma, glucose, and saline solution to combat shock.[4, 7] I have found this treatment unnecessary and advise against its use. During the acute stage, many patients are nauseated and vomit and retch with much straining. Gastric lavage with warm saline solution or continuous Wangensteen suction is recommended in cases in which barbiturates administered rectally fail to control this disturbing complication. A retention catheter is indicated where there is difficulty in voiding and is essential to ideal management in all patients through the period of heavy sedation. An accurate fluid intake and output record should be kept and proper fluid balance maintained.

Digitalization should be achieved rapidly if any degree of congestive failure supervenes and in auricular fibrillation with rapid ventricular rate. Ventricular tachycardia alone contraindicates the use of digitalis. Heart block does not contraindicate its use if failure is present. Levine[7] of Boston formerly advocated the

routine use of quinidine in acute myocardial infarction, but now is more selective in its use. Frequent or troublesome premature systoles always justify its use. Ventricular tachycardia should be controlled with quinidine as rapidly as possible because of the danger of ventricular fibrillation. From 3 to 6 grains may be given intravenously at once and then orally every four hours until normal rhythm is restored. Magnesium sulfate and prostigmine have also been used in this condition.

For the first two or three days, 200 cc. of milk every fou rhours is advocated by Karell as a prepared diet. It requires little physical effort to ingest and does not overload the stomach. Later, a bland diet is allowed but should be of low caloric content, especially if the patient is overweight. Water is given ad libitum.

The bowels may be neglected entirely till the danger of shock is past. Mineral oil, oil-agar emulsions, simple saline laxatives or cascara, or small oil enemas may be prescribed in doses just sufficient for one daily easy evacuation. The strain of using a bedpan is much greater than that of normal commode posture. Bed-height commodes that can be placed in contact with the bed are now available so that the patient may move onto it with as little effort as he moves from one part of his bed to another. He may then have the comfort of normal commode posture without getting out of bed.

In the study of a large series of patients, a committee of the American Heart Association on the anticoagulants[9] reported unofficially that the incidence of thromboembolic phenomena in myocardial infarction is roughly 20 per cent. On post-mortem examination, the incidence is about 40 per cent, whereas mural thrombi are found in approximately 50 per cent of all cases. In this series, there were deaths in 23 per cent of the patients not treated with anticoagulants and deaths in only 13 per cent of the group treated with anticoagulants. These figures are significant and convincing. As early as practical in the course of treatment, patients should be started routinely on anticoagulants providing there is no contraindication to their use. Dicumarol should be begun as soon as the prothrombin time is determined. Heparin, for which no coagulation time determination is necessary, should be given intramuscularly in doses of 50 mg. every four hours until the full effect of dicumarol administration can be achieved. The initial dose of dicumarol is 300 mg. Prothrombin time determinations are made daily and the daily dose of dicumarol is determined after the prothrombin time is known. Prothrombin levels for effective control of intravascular and intracardiac clotting begin at 30 per cent of normal and reach a dangerously low level at 10 per cent of normal. Ordinarily, from 50 mg. to 150 mg. of dicumarol daily is required to maintain this level. Anticoagulant therapy should be continued for about three weeks.

The second phase of treatment begins when shock has been successfully controlled. The purpose of management now is to insure optimal rest so that restorative processes in the myocardium may occur with minimal residual damage. The same principles of diet, rest, bowel management, and so forth should be adhered to. The use of tobacco should be strictly forbidden. Vasodilators may be judiciously employed, and one of preference is nicotinic acid, 50 mg. to 100 mg. orally three times daily. One of the xanthines such as theobromine, 5 grains four times daily, may be given routinely. Whisky, 20 cc. to 60 cc., may be given advantageously before meals and at bedtime in selected patients. The standard principles of management of arrhythmia and congestive heart failure (salt free diet, mercurial diuretics, digitalis) are applicable when indicated. The lungs, heart, abdomen, urinary output, and blood pressure are evaluated daily. An electrocardiogram, sedimentation rate determination, and total leukocyte and differential counts are made at from three to seven day intervals. It is important to encourage the patient and keep his morale high. Prognosis should be discussed with him only if he asks, but always encouragingly and in a favorable vein.

A strict bed rest program should be carried out for from three to six weeks after the attack. The sedimentation rate, although not always dependable, may be used in evaluating repair of the myocardium. If the sedimentation rate returns to normal or pre-attack level, the physician can feel more secure in allowing a program of activity and exercise. More and more I am advocating controlled activity earlier than is the general practice because the myocardium needs exercise to stimulate the development of more adequate collateral circulation. At first, the patient should be allowed to sit on the bedside or the bed-height commode for short periods and later to be out of bed at first once and then two to four times daily. Gradually increasing his activity after three or four weeks, he is out of bed most of his daylight hours but is still required to take periods of rest in the bed each morning and afternoon and to spend not less than nine or ten hours in bed nightly. No physical exercise except walking is permitted. This should be leisurely and unhurried. Fatigue, dyspnea, and precordial pain are indications for further limitations and more gradual increase of activities. By the end of the eighth to tenth week, the patient may drive a

light car for short distances. He may then be permitted to go to his office for short periods daily, still avoiding undue exertion, fatigue, emotional tension, and business responsibilities. During his period of convalescence, the patient should correct any faulty living habits, take meals on a regular schedule, and shift business responsibilities to others. The average patient will have completely recovered in from four to five months and at that time, depending on his degree of cardiac reserve, may resume normal activity. He should be cautioned always to keep within his exercise tolerance.

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DISSECTING ANEURYSMS OF THE AORTA
A Ten Year Study

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UNTIL a few years ago dissecting aneurysm of the aorta as a clinical entity occasioned but little interest. The diagnosis practically always was made at autopsy. However, with the extensive report of Shennan[15] in 1934 the condition has elicited more interest and has come to be more frequently recognized antemortem. Shennan reported 317 cases and noted that the correct diagnosis was made in only 2.2 per cent. Then, in 1942 Flaxman[6] reviewed 112 additional cases and observed that the correct diagnosis was being made in 22.3 per cent. More recent reports have revealed a correct antemortem diagnosis in from about 20 to slightly more than 40 per cent of cases.[1, 3, 13] With this increase in emphasis, there is, of course, always the possibility that the incorrect diagnosis of dissecting aneurysm is made more frequently.

Dissecting aneurysm of the aorta by its rapidity of progress, location, and extent of dissection can simulate a great variety of acute or even chronic medical and surgical conditions. The most common of these is myocardial infarction.

The typical picture in dissecting aneurysm of the aorta is the acute onset of an excruciating, knife-like pain. It is most often substernal or epigastric in location with radiation up or down, into the back, and not infrequently into the neck and extremities. This pain is frequently so severe as to be incompletely relieved even by large doses of morphine. The blood pressure is ordinarily lowered but, since the patient's customary level is generally hypertensive, it often remains above normal. When it falls to normotensive levels, a shocklike state often ensues.

The incidence, sex, and age in reports of dissecting aneurysms as established by postmortem examinations has varied with different investigators. The incidence has been from 1 in 714[6] to 1 in 143.[10] All studies have supported the fact that dissecting aneurysm is more common in men than women, the ratio being about 2 or 3 to 1. The age incidence is in the older age groups, that is, 40 or over. Nevertheless, a considerable number of cases have been reported below the age of 40,[14] and 1 case was found in a 14 months old infant.[1]

RACE

With few exceptions previous reports in the literature have come from areas in which the Negro population was small.[1, 3, 7, 8, 9, 13, 14, 16] As a consequence, relatively few dissecting aneurysms have been reported in this race. In our series of 19 cases covering the ten year period from January, 1938, to January, 1948, at John Sealy Hospital (table 1), 13 were of Negroes. However, during this same period only about one-third of the autopsies were on Negroes. The 19 cases represent an overall autopsy incidence of 1 in 150. The incidence for white persons was 1 in 300 while that for Negroes was approximately 1 in 75.

This racial discrepancy may be dependent entirely upon chance, and there are no other figures from the literature with which to evaluate the observation.

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Assuming that it is significant, we hesitate to presume that it is due entirely to racial variations. In the region from which our material has been gathered Negroes do much of the heavy labor and their dietary habits are more likely to contribute to nutritional deficiencies. It may be that either or both of these factors are of importance in the causation of the disease.

AGE, SEX, AND OCCUPATION

In this series the average age of Negroes was 58 and that of white persons was 59, with an overall average of 58. The age range was 36 to 77 years, with the former the only patient younger than 40. Only 3 patients were between the ages of 40 and 50. The remaining 15 were 50 or older. The male to female ratio was 13 to 6, which was to be expected. In all cases the men belonged to the laboring class; one woman was a laundress, and the others were housewives.

CONTRIBUTING FACTORS

No irrefutable precipitating cause could be established in our cases with the possible exception of 1 which occurred during a prefrontal lobotomy. Other factors which at one time or other have been given a role in the production of dissecting aneurysms are numerous. Trauma and exertion have been considered as possible precipitating factors, but the importance of their role is open to question. Pregnancy[14] has been found to be a definite factor in that it is associated in a disproportionately large number of cases occurring in the younger age groups.

Developmental defects, notably coarctation and hypoplasia of the aorta,[14] have been shown to predispose to dissecting aneurysms. Hypertension has long been considered as probably an important contributing factor in dissecting aneurysm. While hypertension has been associated with the vast majority of cases, it seems obvious that this is not the only or even the primary operative factor; the aortas of fresh cadavers have been found by Oppenheim[12] to withstand pressures as high as 2,000 to 3,000 mm. of mercury.

In our series there was a history of hypertension in 11 cases, and in addition hypertension was present in 4 others at the time of hospital admission. In only 1 case was hypertension definitely not present either on admission or previously. In 3 cases no data were obtainable but 1 of these patients showed at autopsy marked cardiac hypertrophy which could be considered as presumptive evidence of previous hypertension.

SURVIVAL PERIOD

The survival period of patients with dissecting aneurysm is commonly short—a matter of hours to a few days. It appears that rupture into an arterial lumen is a factor which tends to prolong the survival period. In 1947 Bauersfeld[1] in his review of the literature noted that from 10 to 20 per cent of dissecting aneurysms healed completely; however, development of a second dissection occurred in approximately half of these. In 4 of our cases survival was twenty-four hours or less, and in 11 survival was from one and one-half to thirteen days, with an average of six days. In another case 2 healed dissections were found when death occurred from an unrelated disease, carcinoma of the head of the pancreas. In 3 of our cases no data as to survival were available.

ANTEMORTEM DIAGNOSIS

Correct antemortem diagnosis was made in 5 of 20 dissections reported (1 case included 2 different

TABLE 1.—*Summary of Cases of Dissecting Aneurysms at John Sealy Hospital, January, 1938, to January, 1948.*

Case	Age	Sex	Race	Occupation	Hypertension	Survival	Clinical Diagnosis
1	58	F	N	Housewife	210/104	2 days	Myocardial infarction or dissecting aneurysm
2	67	F	N	Housewife	220/120	2 hours	Myocardial infarction or ruptured aneurysm
3	76	M	W	?	185/135	8 days	Myocardial infarction
4	57	M	N	Dock worker	210/140	9 days	Hemothorax, ruptured aneurysm
5A	58	F	N	Housewife	192/128	Healed	Syphilitic aneurysm
B					192/128	Healed	Dissecting aneurysm
6	48	M	N	Laborer	180/130	20 hours	Dissecting aneurysm
7	52	M	N	Longshoreman	200/110	13 days	Appendicitis or cholecystitis
8	72	M	N	Rug maker	200/140	33 hours	Dissecting aneurysm or myocardial infarction
9	61	M	W	Carpenter	No (118/70)	13 days	Uremia
10	60	F	W	Housewife	195/96	33 hours	Congestive heart failure
11	43	M	N	Longshoreman	210/135	5 days	Dissecting aneurysm
12	45	F	N	?	?	?	Dead on arrival
13	59	M	N	Laborer	220/150	1 day	Dissecting aneurysm
14	77	M	N	None	190/90	9 days	Uremia
15	55	F	N	Laundress	190/110	2 days	Nephritis
16	60	M	W	Brewery worker	?	2 hours	Dead on arrival
17	63	M	W	Wharf police	170/124	6 days	Hypertensive cardiovascular disease
18	36	M	W	Soldier	?	?	Dissecting aneurysm
19	58	M	N	Indigent	204/134	?	Dead on arrival

dissecting aneurysms). Since 3 patients were dead upon arrival at the hospital there was no opportunity for antemortem diagnosis, leaving a correct diagnosis in 5 of 17 dissections. In 2 additional cases the diagnosis was strongly considered, but the possibility of myocardial infarction was also mentioned. The diagnosis was missed in the remaining 10 dissections although a ruptured aneurysm was suspected in 2.

SIGNS AND SYMPTOMS

Pain was the most striking symptom encountered in our cases. A reliable history was obtainable in only 13 of the 20 dissections. In 11 of these there was a sudden onset of severe pain. In 1 case the onset of pain was gradual and in the remaining case there was no associated pain. In 8 cases the primary site of the pain was in the chest and/or abdomen. Three of these cases had the primary site in the epigastrium; 1 in the right lower quadrant of the abdomen and the other 2 both in the anterior part of the chest and in the epigastrium. In the remaining 3 cases with acute onset of pain, the primary site was in the back, the lumbar region in 2 cases and the lower thoracic in 1. In the latter case a separate pain was present in the left thigh. The site of the pain in the 1 case with gradual onset was in the anterior part of the chest. These cases therefore followed the usual pattern in that the localizations of primary pain were the substernal and precordial regions, the epigastrium, and the back.

Radiation of pain naturally tended to follow the path of the dissecting process. In 4 of the cases there was radiation to either or both scapular regions. There were 3 cases with radiation to the back and 3 additional cases with radiation to one or both arms, but in only 1 case to the legs. Radiation to the chest and abdomen each occurred in 1 case. Less spectacular, but nonetheless significant, symptoms which often accompanied the acute manifestations included dizziness, vomiting, weakness, cough, hallucinatory

TABLE 2.—*Summary of Pathologic Study in Cases of Dissecting Aneurysms.*

Case	Primary Tear	Extent of Dissection	Secondary Adventitial Tear	Rerupture into Lumen	Anatomic Death
1	2 cm. above aortic valve	Into innominate and down to bifurcation	Obliquely up into pericardium	No	Hemopericardium
2	6 cm. above aortic valve	Few cm. up	Into pericardium	No	Hemopericardium
3	Descending arch	Entire thoracic aorta	4 cm. below primary into right thorax	No	Right hemothorax
4	Origin of left subclavian	Arch, left subclavian left common carotid, innominate	Descending arch into left thorax	No	Left hemothorax
5A	16 cm. below subclavian	Midthoracic aorta (14 cm.)	No	Into aorta after 14 cm. extension	Healed
5B	Just above bifurcation	9.5 cm. down	No	9.5 cm. down into aorta	Healed
6	1.5 cm. above aortic valve	Into left hypogastric and femoral	Below arch of aorta into pericardium	No	Hemopericardium
7	Arch	Down to right common iliac	Into mediastinum and left thorax	No	Left hemothorax
8	Sinus of valsalva (right coronary)	To both common iliacs	Into pericardium at root of aorta, at celiac artery into mesentery	No	Hemopericardium
9	4 cm. below renal artery	8 cm. down	8 cm. down into mesentery	No	Subacute bacterial endocarditis
10	2 cm. above aortic valves	Into left common carotid	Into pericardium	No	Hemopericardium
11	Aortic arch	Into right renal, femoral and mesenterics	Into mesentery	No	Massive mesenteric hemorrhage
12	1.5 cm. above anterior aortic cusp	To 8 cm. above bifurcation of aorta	Into pericardium and mediastinum	No	Hemopericardium
13	Descending arch	Several cm. up and down	Near primary into left thorax	No	Left hemothorax
14	Ascending aorta	Ascending aorta several cm. up and down	No	No	Dissecting aneurysm, bronchopneumonia
15	Descending aorta below left subclavian	To renal arteries	No	No	Dissecting aneurysm
16	7 cm. above aortic valves	To bifurcation of aorta	Into pericardium	No	Hemopericardium
17	Origin of abdominal aorta	To common iliacs	No	No	Myocardial infarction
18	2.5 cm. above aortic valves	To aortic valves and right femoral	At site of origin into pericardium and into mediastinum	No	Hemopericardium
19	At left subclavian	To root of aorta	Into pericardium	No	Hemopericardium

disturbances, and tingling or numbness of the extremities. Usually these were also directly related to the location and extent of the dissecting process, particularly when the symptoms were referred to the extremities.

The presenting signs accompanying the above symptomatology were in themselves not diagnostic. There was obvious dyspnea in 7 patients, 2 of whom had Cheyne-Stokes respirations. There were 5 patients who were in shock and 4 who were comatose or semicomatose. Actual cyanosis was observed in only 1 patient. Other physical signs were frequently more helpful. In 1 case there was no arterial pulse in the left leg and the entire extremity was cold, with a systolic thrill and murmur over the right femoral artery. These observations along with previous symptoms were helpful in making a diagnosis of dissecting aneurysm.

The blood pressure was elevated in 11 patients who were not in shock. As would be anticipated, cardiac enlargement was clinically demonstrable in the majority of cases. Possibly significant murmurs which were observed included 7 systolic and 2 diastolic aortic murmurs. Signs of fluid in the chest and of cardiac tamponade were present but only after secondary adventitial tears had occurred. These signs indicated hemorrhage into the pleural sac or into the pericardium.

LABORATORY DATA

Leukocytosis was present in all but 1 of the patients who had blood counts. In 1 case the white blood cell count was as high as 18,550 per cubic millimeter of blood. Anemia was found in those patients in whom a massive hemorrhage had occurred. The urinalyses were not significant except for 1 case in which a microscopic hematuria was associated with dissection of the right renal artery. In electrocardiograms of 9 patients the left ventricular "strain" pattern was uniformly seen, with bundle branch block present in 2 cases. All the electrocardiograms were abnormal with other nonspecific changes suggestive of myocardial damage. In 1 patient an actual myocardial infarction was a concomitant observation; in no other patient were there changes suggestive of myocardial infarction. Radiologic studies demonstrated either aneurysms or aneurysmal dilatation in 7 out of 11 cases examined; in 1 of these a dissecting aneurysm was strongly suggested and in another it was listed as a possibility by the radiologist.

PATHOLOGY AND PATHOGENESIS

The anatomic cause of death (table 2) was generally directly associated with the dissecting process. Hemopericardium occurred in 9 cases in amounts up to as high as 1,450 cc. Hemothorax, seen in 4 cases, was the next most common cause of death with hemorrhage as much as 3,500 cc. in a single pleural cavity. Cardiac hypertrophy was observed in 15 of the 19 autopsies. Syphilitic aortitis was found in only 4 cases, 3 of which had previous positive blood tests, while the fourth was without a record of serologic study. Two of these cases showed extensive dissections. The 1 patient who had 2 healed dissections had syphilis of the aorta.

Atherosclerosis of a significant degree was found in 16 cases. In table 2 it is to be noted that the primary dissection was found most frequently in the arch of the aorta. The extent of dissection varied from only a few centimeters to as far up as the common carotid arteries and as far down as the femoral arteries. Medionecrosis was present in 10 and questionable in the other 2 of 12 cases in which the aorta was studied microscopically. In 7 cases the aorta was not so studied. Originally, atherosclerosis was thought to be the most important predisposing factor in the pathogenesis of dissecting aneurysm. However, present day investigators,[2, 4, 5, 11] while perhaps not completely discounting the role of atherosclerosis, question it. They have generally come to the conclusion that medionecrosis with formation of hematomas from rupture of vasa vasorum is by far the most important etiologic factor.

CONCLUSIONS AND SUMMARY

Nineteen patients with 20 dissecting aneurysms covering a ten year period (January, 1938, to January, 1948) are reported.

The series is notably one of few in which a substantial number of cases were found in Negroes and the only one in which the great majority were Negroes. This series further differs from other large series in the discrepancy between the ratio of Negro to white autopsies as compared to the ratio of Negro to white dissecting aneurysms. Whether the discrepancy is due to chance, race, occupation, or diet is at present speculative.

The symptomatologic, physical, laboratory, and pathologic observations confirm and emphasize significant data of previous reports.

Hypertension was present in 15 out of 16 cases in which blood pressure data were available.

Medionecrosis was present in 10 of 12 cases in which microscopic examination of the aorta was made.

One of the patients had syphilitic aortitis with 2 individual healed dissections demonstrated at autopsy; 1 of these had been diagnosed clinically.

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MODERN CONCEPTS OF LEPROSY

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JUDGING from admissions to the National Leprosarium at Carville, La., leprosy is now slightly more prevalent in Texas than in Louisiana, which was the leading state for many years. The trend in Texas is stationary or perhaps slightly upward. The cases for the most part are far advanced on discovery and there is no evidence of improvement in this respect. Therefore, although the disease is a minor problem numerically, it is nevertheless serious.[10, 11]

Progress in our knowledge of leprosy has been slow. It is seventy-five years since Hansen described the microorganism now known as Mycobacterium leprae, but although many facts have been accumulated, the principal questions still remain unanswered. On the favorable side, some of the facts which have been established in recent years are demanding explanation and stimulating research.

CULTIVATION OF BACILLUS

It is probable that the leprosy bacillus has never been cultivated; a few workers have claimed success but their results have not been confirmed. At the Leonard Wood Laboratory at the Harvard Medical School, Hanks is continuing his efforts, commenced in the Philippines, to grow leprosy bacilli in tissue cultures. At present he is concentrating on the bacillus of rat leprosy (Stefansky's bacillus), which likewise has probably never been cultivated. In his previous work with material from human beings, Hanks[8, 9] found that tissue cultures from lepromas could be kept alive for from fourteen to thirty-four days, but the only cells which remained through the whole period were fibroblasts, which ordinarily contain no bacilli or only a few. Cultivation and maintenance of fibroblasts from nodular or tuberculoid lesions for periods of from two to seven months did not result in multiplication of leprosy bacilli within these cells.

CONTAGIOUSNESS

In 1933 the Leonard Wood Memorial and the Philippine Bureau of Health commenced field studies which have been continued since except for interruption caused by the war. The principal findings are as follows: (1) Most cases of leprosy are contracted in childhood. (2) The risk of contracting the disease when exposed in the household to the lepromatous type is far higher than is generally appreciated. For males most of whom were exposed in early life the proportion developing leprosy prior to the age of 30 was 29 per cent. (3) The risk of contracting leprosy for persons exposed in the household to the lepromatous type was about eight times as high as for otherwise comparable persons living in the same community. (4) The risk for persons exposed in the household to non-lepromatous cases was not appreciably higher than for the general population of the community. (5) In a relatively small experience there was no material difference in risk associated with any particular relationship to the patient, that is, it did not seem to matter whether the patient was father, mother, brother, or sister. (6) There was a clear association between age at time of exposure and the development of lepromatous leprosy, being highest for those exposed before the age of 5 years. In the areas studied, persons with the lepromatous type

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were segregated in institutions as soon as possible after discovery.[2]

The above observations require additional interpretation; otherwise they may give an exaggerated impression of the contagiousness of leprosy. The highest attack rates found, that is, those after exposure in the household to a lepromatous case, amounted roughly, for persons of all ages, to 1 attacked each year for 200 exposed. Of children of 10 to 14 years, most of whom had been exposed in infancy, 1 in 70, on the average, developed the disease each year. Of persons over 20, only 1 in 600 or 700 was attacked annually. A comparison with tuberculosis in the same area is not possible as data are not available. It is probable, however, that the risk of developing the adult type of tuberculosis when exposed in the household to an open case is at least twice as high as the risk of developing leprosy when similarly exposed.

LEPROMIN TEST

Mitsuda[12] first reported that intracutaneous injection of an emulsion of boiled leprous tissue rich in bacilli usually produced no reaction in lepromatous leprosy but a marked local reaction in neuromacular leprosy, which took the form of a nodule in the skin, usually appearing two or three weeks after injection. The same author[13] reported positive results also in healthy contacts and in noncontacts and interpreted his findings as indicating resistance of neural patients and healthy persons and lack of resistance in lepromatous patients. The extensive literature on the subject has been reviewed recently by Dharmendra,[1] one of the principal workers with the test. It is now agreed that in lepromatous disease the test is practically always negative. In the tuberculoid type it is usually positive, and in the indeterminate group and in normal persons the frequency of positives increases with age.

Dharmendra has found that the active principle of lepromin is the protein antigen of the leprosy bacillus. When injected in solution this produces an early reaction. He considers the late reaction of Mitsuda to be produced by the same antigen, which is slowly liberated from the breaking down of the bacilli contained in the leprous tissues which are injected. He considers that the reaction is allergic in nature but not always specific, being perhaps in some cases dependent upon sensitization with other acid-fast bacilli of which the most important is the tubercle bacillus. He regards the test, however, as of definite prognostic value in all cases of leprosy, loss of sensitivity to lepromin carrying a poor prognosis and acquirement of sensitivity being an indication of increased resistance.

Dharmendra makes the interesting suggestion that the test might be used to gain evidence as to the probability that a supposed culture of M. leprae is genuine. A true culture would be expected to cause the same type of reaction as lepromin, that is, to give negative reactions in the lepromatous type and positive, for the most part, in the tuberculoid, as will be discussed later.

EARLY DIAGNOSIS

New methods of staining the leprosy bacillus have been described, but no fundamental advances have been made in the recognition of the disease in recent years. The principal reason for delay in diagnosis is still the fact that physicians, in areas where the disease is uncommon, do not have leprosy in mind. Furthermore, leprosy is so protean in character that it may resemble a variety of diseases in which macular eruptions are present, a number in which there are polyneuritic symptoms, and a number in which there are skin lesions resembling those of the lepromatous type. Similar macular eruptions may occur, for example, in psoriasis, seborrhea, the tineas, syphilis, and, in certain countries, yaws and dermal leishmaniasis. Frequently blood serologic reactions are positive in leprosy, a fact which adds to the difficulty of differentiation from syphilis. Syringomyelia, cervical rib, and peripheral neuritis due to various toxic causes have been mistaken for neural leprosy, and vice versa. Dermal leishmaniasis, acne, and diffuse adenomas may present superficial resemblances to lepromatous leprosy.

The three cardinal points in the diagnosis of leprosy emphasized by Rogers and Muir[14] remain unchanged. They are (1) finding of acid-fast bacilli, (2) thickening and tenderness of nerves, and (3) impairment of skin sensation. A definite diagnosis should rarely be made unless at least one of these three is present.

CLINICAL CLASSIFICATION

The classical nomenclature of leprosy was overthrown officially by the Fifth International Congress on Leprosy held at Havana in 1948. The old division into lepromatous (tubercular) and maculoneural (anesthetic) types described by Danielsson and Boeck in 1848 and made clearer by Hansen and Looft in 1894 is, however, too firmly established to be quickly abandoned. The new terminology is essentially that of the South American school. Two principal types, lepromatous and tuberculoid, are recognized with subsidiary recognition of a group of cases classed as indeterminate. There will inevitably be some confusion between the tuberculoid type and the indeterminate.

The lepromatous type remains as before with greater precision of description. It is the malignant form of the disease, with minimal resistance on the part of the patient to the existence, multiplication,

and dissemination of the bacilli. The characteristic clinical manifestations are lepromas in the skin, mucous membranes (especially of the upper respiratory tract and the eye), and/or the peripheral nerves, together with involvement of other organs. There is regular failure to react to lepromin. Histologically, the characteristic is granulomatous structure and the typical lepra cell, first described by Virchow as vacuolated, the vacuoles giving the cell a foamy appearance. These lepra cells are often literally filled with acid-fast bacilli. The peripheral nerves may be infiltrated by lepra cells, with later formation of fibrous tissue in the endoneurium. There is a marked stability of type and a tendency to progression. These cases are infectious or "open."

The tuberculoid type is considered to represent a considerable degree of resistance to the bacillary invasion. The clinical manifestations tend to be limited. In the skin, tuberculoid macules (major or minor leprides) occur, variable in size, shape, and number, but usually if not always elevated above the level of the surrounding skin. The earliest lesion is a small macule or papule which extends irregularly, flattening at the center and leaving an atrophic central area in which there is loss of sensation and often partial loss of pigment. Histologically, the epithelioid cell is characteristic. The picture may be identical with that sometimes seen in tuberculosis of the skin with the classical giant cell of Langhans as a prominent feature. There is an intense invasion of peripheral nerves, notably of the ulnars and peroneals, by small round cells and by epithelioid and giant cells, the cellular infiltration usually beginning around small vessels. The involved nerves may become greatly thickened and surrounded by a dense fibrous sheath. The lepromin reaction is positive in a majority of instances. There is marked stability of type and a tendency to spontaneous regression. The cases are usually noninfectious or "closed."

The new indeterminate group includes those cases with simple macules formerly included with the neural type. In these macules (simple leprides) there is usually little, if any, thickening of the skin. Histologically, the lesions are of a simple inflammatory nature. The whole area may be hypochromic and exhibit variable degrees of anesthesia. Stability is much less certain than in the lepromatous or the tuberculoid type. The lepromin reaction is more often negative than positive. Usually no bacilli or few can be found. These cases are usually noninfectious or "closed" but may develop into either the lepromatous or the neural type.

THERAPY

The time-honored place of chaulmoogra oil and its esters as a specific for leprosy is about to be taken by the sulfone group of drugs although there are some authorities who still retain faith in chaulmoogra.

Sulfones were first used in leprosy in 1941 by Faget and his co-workers (1943 at Carville following a report by Feldman and others[6] of its favorable effect on tuberculosis in guinea pigs). Results at first were not promising. The drug was given orally and toxic symptoms were severe. A similar but less toxic drug called Internal Antiseptic No. 307 was then given to one group of patients and a placebo to another. After eight months the sulfone group was in much better condition. A preparation of Promin for intravenous use then became available. Later relatively nontoxic sulfones for oral use were manufactured, including Diasone and Promizole in the United States and Sulphetrone in the United Kingdom. All the sulfones used in leprosy are derivatives of diaminodiphenyl-sulfone, and it is probable that this common radical is the active principle.

The sulfones, as a rule, are excreted rapidly in the urine but there is wide individual variation in this respect.[15] Treatment is initiated with small doses which are increased gradually to 5 Gm. daily for Promin and 1 Gm. daily for Diasone. The drugs are given for several years with a rest period every third week in the case of Promin and one of two weeks every two months in the case of Diasone. Definite clinical improvement does not appear until after three to six months.

Faget and Erickson[4] reported 12 per cent of cases as arrested after two to three years of treatment and 26 per cent after three years or longer. After three years, however, practically all patients show some improvement. Nodules show shrinking and flattening. Eye lesions have not responded well but those treated have for the most part been advanced. Ulcers usually heal, nasal obstruction disappears, and there is roentgen-ray evidence of healing of certain types of bone lesions.[3]

Many patients, while greatly improved clinically, continue to be bacterioscopically positive after several years of sulfone therapy, indicating little destructive effect on bacilli in the lepromas. Based upon a study of the histopathology of lesions before and after Promin treatment, Fite and Gemar[7] expressed the opinion that Promin is capable of eliminating the bacilli from the blood stream and thus of preventing new lesions. Lesions already present thus may be afforded a better opportunity for spontaneous regression.

The most frequent toxic manifestation observed in sulfone treatment is a slow destruction of the erythro-

cytes. Occasionally leukopenia is seen. Wolcott[16] has expressed the belief that there is some evidence that erythema nodosum has become more frequent at Carville since the advent of the sulfones. It occurred in only 7 per cent of patients before sulfone treatment and in 93 per cent subsequent to treatment. This complication usually occurs within six to twelve months after treatment is started. Erythema nodosum is not to be confused with the acute lepra reaction, which is uncommon in patients under treatment with sulfones.

From a statistical point of view the sulfones have not met the test of adequately controlled clinical trials. Also the enthusiastic reports which followed the early use of chaulmoogra esters are still remembered. Nevertheless, among leprologists with extensive experience with the sulfones, there is complete agreement regarding their value.

Several of the antibiotics have been tried in leprosy. Penicillin has no effect on the primary disease, nor, apparently, has streptomycin. Aureomycin has not yet been given adequate clinical trial.

Interesting experimental work is being done at Carville with physiotherapy. The contractures of neural leprosy have always been regarded as permanent and this may be correct. However, efforts are being made to determine to what extent, if any, function can be restored by massage, electrical stimulation, and passive movement.

Surgery also has a place in treatment. The natural amputations are often badly situated from the functional point of view and surgery may make possible the use of an artificial limb. Also it has been found that occasional patients with intractable ulcers on an extremity are much better off after amputation. Plastic surgery was almost impossible formerly; there have been several successful implants in patients under sulfone therapy.

PUBLIC HEALTH MEASURES

Because of misinformation on the part of the public, the control of leprosy is peculiarly difficult. In endemic areas, health officers should lose no opportunity to publicize the actual facts regarding the disease. Also steps should be taken by local medical societies to bring to the attention of physicians from time to time the cardinal points in diagnosis, therapy, and control. The principal points are to make a diagnosis early and to prevent intimate association of lepromatous patients with young children. Administratively, cases should be handled by local health units in much the same manner as tuberculosis, without newspaper or other publicity.

The procedures should include, first of all, an accurate diagnosis of the type of case. If it is tuberculoid or indeterminate, and bacterioscopically negative, there is usually no occasion for hospitalization or isolation except as hospitalization may be required for treatment of ulcers or contractures. Reexamination is advisable annually, especially for patients whose condition is classed as indeterminate.

The patient with lepromatous leprosy is in a different position. He must be given the advantage of the best available treatment, at present with sulfones, as soon as possible. If the condition is advanced or if regular medical supervision is not possible at home, and in all instances where there are children in the household, the patient should be sent to a leprosarium. In the United States, we are fortunate in having a fine institution, the National Leprosarium, at Carville, La., operated by the U. S. Public Health Service.

Household associates of a patient with any type of leprosy should be examined on discovery of the case by a physician familiar with the disease. There is some discussion as to reexamination. I feel that there is nothing to be gained by the repeated examination of associates of patients who remain bacterioscopically negative except perhaps for study purposes, that is, to gain additional evidence to support the Philippine findings. Associates of bacterioscopically positive patients should be reexamined at intervals to the age of perhaps 30 years. These examinations need not be frequent, once every two years being adequate. They should, however, be thorough as small macular lesions are often missed. It is hardly necessary to add that contacts who are free from the disease should be subjected to no restrictions other than the reexaminations which may be required.

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ANORECTAL DISEASE IN GENERAL PRACTICE

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ANORECTAL disease has been the stepchild of medicine. It is only in recent years that any appreciable instruction in this field has been given the student of medicine. Furthermore, even qualified doctors have not taken the time to examine patients with anorectal complaints and either treat the condition or direct the patient to some reputable physician who is willing to help. This is true, notwithstanding the fact that anorectal diseases are readily accessible so far as examination is concerned. Most such conditions are in the last 7 inches of the bowel, and the majority of them may be treated successfully by general practitioners who first find, or should find, them in the ordinary run of office examinations.

The physician usually considers the signs and symptoms presented by the patient, a careful history, and a thorough examination as the basis for a fairly dependable diagnosis; however, too frequently he is either willing to accept the self-made diagnosis of "piles" offered by the rectal patient or, if rectal or bowel symptoms such as itching, pain, diarrhea, or bloody stools are presented, to write a prescription for suppositories, purgatives, bismuth and paregoric preparations, salves and pile ointments without any sort of examination. The reason for this may be twofold: (1) The idea of handling the sewer end of the human anatomy may be distasteful to the physician, and (2) he knows there is an element of embarrassment on the part of the patient in having such an examination made. However, a tactful physician can always brush aside the barrier of embarrassment by simply stating the importance of such an examination or the danger of no examination at all. A pertinent reason for making such examinations is the fact that rectal symptoms are among the most misleading with which physicians have to deal: Their severity may be out of all proportion to the insignificance of the pathologic condition or they may be mild or entirely lacking when the pathologic state is extremely grave.

Read before the Section on General Practice, State Medical Association of Texas, Annual Session, San Antonio, May 4, 1949.

EXAMINATION TECHNIQUE

Rectal examinations, generally speaking, are easily made in the physician's office, either with the patient on the left side with the knees drawn up or in the knee-chest or knee-shoulder position. In all of these positions he can be draped to prevent undue exposure; all that is needed is a small sheet with a 4 inch hole in the center. Contrary to the general belief that it is necessary for the patient to have had a purgative and an enema previously, a large percentage may be examined without any preparation at all. If the patient has had a morning evacuation and does not have a diarrhea, there is no large amount of fecal matter in the rectum and what is present is usually firm and may be manipulated out of the way. With the buttocks separated with the two hands there is no pain or trouble about inspection of the exterior. If there are painful abrasions, a small swab of 1 per cent cocaine or 2 per cent Butyn inserted within the grasp of the sphincter muscle will alleviate the suffering to such an extent that a well lubricated and gloved finger or an instrument may be inserted without difficulty. No expensive or high priced instruments are needed—probably two anoscopes and the light from an open window or an ordinary head light will let the physician see a large number of the pathologic conditions. Those that cannot be seen can probably be felt with the index finger.

DIAGNOSIS BY INSPECTION

Several common diseases may be diagnosed by inspection alone:

1. *Pruritis ani* is a thickened and abraded condition of the skin surrounding the anus and noted for its extreme itching. This condition is usually not a disease per se, but the result of pathologic conditions of the anus, rectum, or urogenital tract, or irritation from clothing, moisture, and so forth. Usually diligence will reveal the cause. I have had cases in which simply

snipping off a skin tab or a hypertrophied anal papilla afford some relief. Some cases, however, are not so easily relieved and require specialized types of treatment; some do not respond to treatment at all.

2. *The anal fissure* is one of the most painful lesions of the anorectal area. However, all cracks around the anal margin are not true anal fissures and will heal readily by daubing some mild antiseptic between the loose folds of skin. A true fissure is a chronic ulcer and in the majority of the cases is situated in the posterior commisure; a few are found in the anterior commisure, however. This ulcer is not different from ulcers found elsewhere. At the outer extremity is the sentinel pile and often at the inner extremity is a hypertrophied papilla. If the ulcers are not too extensive and too chronic, injection of one of the long lasting anesthetics such as Nupercaine under the base will give immediate relief from pain, which in turn will relax the sphincter and allow the ulcer to heal spontaneously. Here again there are a certain number of lesions that will not be relieved by treatment of this sort and will have to be eradicated by surgical procedures.

3. *Fistula-in-ano* is another rather frequent condition of importance. The external appearance is familiar—there may be one or a half dozen openings. If there is doubt as to whether or not the openings communicate with the bowel, a few granules of methylene blue in peroxide of hydrogen injected into the external opening may be visualized through the anoscope as it appears in the bowel. In probably 90 per cent of the cases the internal opening is situated in the posterior commisure and at the mucocutaneous junction. Invariably the treatment is surgical and not so simple as for some of the other pathologic conditions, but at least the diagnosis is easily made in most cases.

4. *Hemorrhoids* may usually be visualized by separating the buttocks and asking the patient to strain down as though he were having a difficult bowel movement. There are three varieties: the external, which are below the dentate margin; the internal, which are above the dentate margin and covered entirely by mucous membrane; and the extero-internal. There is no difficulty in their diagnosis. Internal hemorrhoids which do not prolapse easily can be treated successfully by the "injection method" provided a mild escharotic (not in an oil base) is used, too much solution is not injected, and it is not injected too often. External hemorrhoids should never be treated by this method, and it is questionable whether the mixed variety should be so treated. All that cannot be treated by this method should be handled surgically.

DIAGNOSIS WITH INSTRUMENTS

A great variety of electrically lighted anoscopes and proctoscopes are on the market; although they are a great refinement, they are not an absolute necessity in the diagnosis of the majority of rectal diseases. An ordinary anoscope, varying in length from 2 to 5 inches, with light furnished by a hand mirror or a head light, is probably all that is needed to make creditable diagnoses in a large majority of pathologic conditions found in the lower segment of the rectum. For inspection of the bowel higher up an electrically lighted sigmoidoscope with rubber bulb attachment for inflation must be used.

Before making an instrumental examination it is always well to insert a well lubricated gloved finger. This procedure serves two purposes: (1) The physician will instantly and with certainty be able to feel an ischiorectal or a pelvirectal abscess, a stricture, a broken or deformed coccyx, an oleoma, foreign bodies, and in some instances a cancer. (2) The gentle insertion of the finger will help to relax the sphincter muscle and prepare it for the entrance of the harsher instrument. It is well to mention that the reason for pain on instrumentation is often due to the fact that the physician forgets the direction of the anorectal canal; the instrument, as it is inserted, should be pointed at the umbilicus.

Before mentioning the most common conditions seen through the anoscope, it might be well to call attention to a few of the normal structures and landmarks. First is the mucocutaneous junction—the so-called dentate or saw-tooth line—sometimes hard for the beginner to recognize with certainty. It is situated 2 cm. above the anal margin and, as seen through the anoscope, is a ring of small projections, between each of which is a small pocket or crypt. These crypts elaborate mucus, which is thought to act as a lubricant during bowel evacuation. It is also important to remember that the blood, nerve, and lymph supply is entirely different above and below this line. The lymph channels above drain to the sacral and hypogastric nodes, whereas those below drain to the inguinal glands. Thus a bubo may be the first indication of anal infection or anal epithelioma. Also the sense of pain above the dentate margin is negligible, but intensely acute below it. Next comes the mucous membrane, which varies from a pale pink to a brownish color and has a velvety appearance. A good thing to remember, no matter what the color, is that healthy mucous membrane does not bleed when wiped with a cotton swab.

From below upward the most common pathologic conditions seen include the following:

1. *Enlarged papillae* may not be of vital importance. Only when they are enlarged to such an extent

that they cause pain, burning, a sense of incomplete evacuation, or prolapse, do they need attention.

2. *Cryptitis* is an inflammatory condition of the pockets at the mucocutaneous junction. The primary cause may be some specific infection or infection as an aftermath of ulceration which has been produced by foreign bodies lodging in these crypts. In fact it may be possible to recover berry seed, bran flakes, or other irritating substances from them at times. The infected crypt is recognized by the reddened and macerated appearance of the mucous membrane; it bleeds when wiped with a cotton swab and is painful to touch. Ulceration in the bottom of these pockets is usually the etiologic factor in fistula formation.

3. *Internal hemorrhoids,* which are diseased and dilated venous channels, are not difficult to recognize.

4. *Strictures* may be mentioned only because they are not prevalent in most sections of the country; they are the result of irritation with subsequent scar tissue formation and sometimes result from too vigorous surgery.

5. *Proctitis* may vary from a mild inflammatory condition to severe ulceration involving the whole rectal pouch. It may be specific or secondary to nonspecific conditions. The mucous membrane bleeds or exudes bloody serum when wiped with a cotton swab. Ulcers, when present, exhibit different characteristics, depending on the etiologic factor involved. However, the important consideration is to be able to differentiate between a benign and a malignant ulcer. Benign ulcers are always surrounded by a considerable area of redness; the ulcers of amebic dysentery and ulcerative colitis are good examples.

6. *Carcinoma* is practically always a single, necrotic, bleeding lesion, and its appearance is so characteristic that the least experienced examiner will recognize it without doubt in the majority of cases. Usually normal mucous membrane is present up to the edge of the ulcer.

Foreign bodies of many sizes, shapes, and descriptions have been recovered from the rectum. Each individual article presents its own problem of removal.

SUMMARY

A patient is entitled to an anorectal examination by his family physician. In most cases the diagnosis is easy to make and the general practitioner should be able to treat successfully a large majority of anorectal ills. Some of the most common conditions which can be diagnosed by inspection alone and others which require simple instruments are described.

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ABSTRACT OF DISCUSSION

DR. T. D. YOUNG, Roscoe: Medicine has become specialized almost to the point of the right tonsil snatcher and the left tonsil snatcher of the old jokes. In the last few years there has been a definite trend back to doing general practice—at least more physicians admit that they examine the entire patient. No one of us can know everything even about one specialty, but we can examine every patient we see. No examination should be complete without a rectal examination.

A few days ago a patient came into my office with the complaint of "piles." A neighboring physician had given the usual ointments. By the simple procedure of having him lower his clothes and inspecting his area of complaint, a prolapsed polyp was observed. It was easily removed under local anesthetic. Thrombosed external hemorrhoid can be incised under local anesthesia, but the physician must examine the patient and must follow up the case later.

If we physicians can learn to *see* and *feel* our patients, we will make fewer mistakes and will make many more happy patients. This need applies to general practice as well as to all specialties.

ALLERGY AND TIREDNESS

In evaluating symptoms of tiredness and ascertaining its cause, too much emphasis is being placed upon the emotions and not enough upon allergies, believes Dr. M. G. Meyer, Michigan City, Ind. He pointed out at a meeting of the American College of Allergists in St. Louis in January that there are emotionally disturbed, intelligent persons seen every day in physicians' offices who do not complain of being tired. Over a three months' period 6 per cent of the patients whom he saw for tiredness made surprisingly good recoveries when an offending allergen, usually a food, was eliminated from the diet.

National Death Rate Declines

The death rate for accidents decreased to 67.0 deaths per 100,000 population in the United States in 1948 from the rate of 69.4 for the previous year, according to statistics released recently by the Federal Security Agency. The death rate for motor vehicle accidents in Texas was 1,978, or a rate of 26.8, as compared to the national total of 32,259, or a rate of 22.1. Other accidents in Texas numbered 3,204, or a rate of 43.5, as compared to the national total of 65,742, or a rate of 45.0. Accidents took a toll of 98,001 lives in 1948 as compared with 99,579 in the previous year. More than twice as many men as women were killed by accidents: 67,082, or 92.5 per 100,000 for men; and 30,919, or 42.0 per 100,000 for women.

Atlas of Tumor Pathology

Now in preparation is a 3,000 page "Atlas of Tumor Pathology" to which thirty eminent pathologists will contribute. Sponsored by the Armed Forces Institute of Pathology for the National Research Council and six other groups, complete publication of the thirty-nine parts, each covering cancers of definite organs, will probably require two more years.

CASE REPORTS

FAR ADVANCED PELVIC CARCINOMA TREATED BY PELVIC EXENTERATION

Report of a Case Complicated by Lower Nephron Nephrosis

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THOSE who have watched any significant number of patients in the throes of advanced cervical carcinoma are no doubt impressed by the extremely insidious nature of this type of cancer. In view of the few reports in the literature on pelvic eviscerectomy for the treatment of advanced carcinoma of the pelvis, this case should be of interest.

Cervical carcinoma is a neoplasm which usually remains localized in the pelvis for long periods. Postmortem studies show that only one-half of the patients dying from cancer of the cervix exhibit spread of the neoplasm beyond the pelvis,[5] the other half dying of uremia due to ureteral obstruction, hemorrhage, and infection. Squamous cell cancer characteristically invades the circulatory system late and kills by local invasion as a rule. Since practically all cervical cancers are squamous cell in origin, it would appear that this type of neoplasm is favorable for surgical attack.

In 1946, Dr. Alexander Brunschwig decided to remove these cancers by excision of all involved pelvic tissues, hoping at least for palliation if not for cure. On December 12, 1946, he performed a one stage abdomino-perineal operation for advanced carcinoma with end colostomy and bilateral ureteral implantation into the colon above the colostomy following complete excision of all the pelvic viscera. By July, 1948, he had performed more than 20 such operations and reported them in *Cancer*.[2] Since then he has performed the operation on additional patients to bring the total to nearly 100. Of these, 15 have survived; 1 has lived two years and five months.[4]

The following case report illustrates the possibilities as well as the difficulties of this type of radical surgery.

CASE REPORT

Mrs. J. L., a 60 year old white woman, was brought in October 28, 1949, by her daughter to be certain that every possible source of therapy for a far advanced pelvic cancer had been used. She stated that in October, 1947, a "total hysterectomy" was done for carcinoma of the cervix. About six months later the patient was treated with radium for recurrence. She received two subsequent radium implants of unknown dosage in the next three months. Since August, 1948, she had had constant dribbling of urine, a copious foul vagina discharge, and, prior to admission, two rather brisk hemorrhages. In addition, she complained of constant low back pain and felt that death would be preferable to her plight at that time.

Physical examination revealed a well-preserved, middle-aged, white woman moderately well proportioned, but extremely pale. Except for the pelvis, the remainder of the examination was negative. There was marked suprapubic tenderness and an ill-defined suprapubic mass. There were no other areas of tenderness and no palpable abdominal viscera or other masses. There was no inguinal adenopathy. Pelvic examination revealed foul smelling, copious, seropurulent discharge coming from the vagina. The vagina was fixed in the upper half and had a hard, granular mucosa. Digital examination was extremely painful to the patient and revealed fixation of all pelvic viscera into one mass of indurated tissue. The blood count was normal. Roentgenograms of the lumbosacral spine and pelvis and of the chest were negative for metastases. These were the only laboratory data preoperatively.

The patient was told that the alternative to her status at that time was radical surgery, which would leave her with no pelvic organs or perineum. After due consideration she elected surgery.

Preoperative treatment consisted of one blood transfusion and preparation of the bowel with sulfasuxidine.

On November 4, 1949, the patient was operated upon under general anesthesia. The first procedure, through two separate inguinal incisions, was an extraperitoneal dissection of the iliac vessels, retroperitoneal fat, and lymphatics. Following this procedure a total pelvic eviscerectomy, vulvectomy, and removal of the lumbosacral retroperitoneal fat and lymphatics was performed. The ureters were anastomosed to the sigmoid colon, which was brought out as an end colostomy in the midline. There was absolutely no evidence of carcinoma in the tissue above the broad ligaments. The perineum was closed over laparotomy packs. The abdomen was closed in layers with interrupted silk. The operating time approached eight hours, and during the last hour, as the perineum was removed, the patient's blood pressure dropped to 40/0 and remained there for at least one hour. Except for acute renal failure, her recovery was uneventful. The management of the renal failure was hampered by lack of information concerning the daily urinary volume and urinary salt output. It became necessary to manage the fluid balance problems by strict clinical observations.

At the time of the operation a ureteral catheter was placed in the right ureter up to the renal pelvis. The left ureter was moderately dilated and had a more than adequate opening into the bowel. For five days no urine was obtained via the catheter and no fluid escaped via the colostomy, indi-

cating an extreme grade of renal failure. During this time the blood nonprotein nitrogen level became prominently elevated (table 1). On the sixth day urine escaped around the ureteral catheter and the catheter was removed. The urine output became profuse on the ninth day and remained copious for four days. The nonprotein nitrogen concentration abated and subsequently recovery occurred.

This patient was treated by an attempt to maintain a nearly normal state of fluid balance during each of three phases. (See "Discussion.") No attempt was made to dilute the nonprotein nitrogen. The main aim was to maintain life long enough for the renal tubules to recover. To this end the following was done: During the operation and the period of shock the blood volume was maintained with 3 liters of whole blood, 1.5 liters of plasma, and 1 liter of saline solution. Even with these volumes the shock was sufficient to damage renal tubules and initiate the renal failure. That the blood replacement was incomplete was demonstrated by the subsequent development of anemia. During the anuric period an additional 1.5 liters of blood was given for the anemia. During the first six postoperative days the daily fluid intake amounted to from 1 to 1.5 liters as replacement for the estimated insensible water loss and the amount removed by gastric suction (table 1). Clinically the patient appeared to be in adequate fluid balance. On this regime diuresis occurred and the secretion of urine became copious. Since the volume of urine could not be measured the daily intake of fluid was adjusted to from 5 to 6 liters containing 12 Gm. of sodium chloride, 3 Gm. of sodium bicarbonate, and 4 Gm. of potassium chloride. A high protein, low residue diet was initiated.

TABLE 1.—*Summary of Course of Patient Treated for Far Advanced Pelvic Carcinoma by Pelvic Exenteration.*

Date	Intake	Temperature, Pulse, and Respiration	Blood Pressure	Laboratory Data	Comments
11-4-49 (Surgery)	1,000 cc. 5% sodium chloride solution 3,000 cc. blood 1,500 cc. plasma	98-130-30	Shock 40/0 to 0/0		Patient in profound shock for 1 hr. after 8 hr. of surgery; anuria
11-5-49 (1st day postoperative)	1,000 cc. blood 1,000 cc. 10% dextrose in water	101-120-25	140/82		Diaphoresis; good day; profuse perineal drainage; anuria
11-6-49 (2nd day postoperative)	1,000 cc. 10% dextrose in water 500 cc. blood	98.6-90-24	130/90		200 cc. output per Levin tube and sanguinous perineal drainage; anuria
11-7-49 (3rd day postoperative)	1,000 cc. 10% dextrose in water 500 cc. 5% dextrose in Hartmann's solution	99.6-108-20	140/90	Red blood cells 3,700,000 Hemoglobin 10 mg./100 cc. Nonprotein nitrogen 83 mg./100 cc. Chloride 478 mg./100 cc. Hematocrit 39 vol./100 cc.	Profuse diaphoresis; nervous and apprehensive
11-8-49 (4th day postoperative)	1,000 cc. 10% dextrose in water 500 cc. 10% dextrose in Hartmann's solution	98.6-112-24	150/80 180/106	Carbon dioxide 64 vol./100 cc.[a] Protein 6.3 Gm./100 cc. Chloride 500 mg./100 cc.	Facial, carpal, and ankle edema 1+; very nervous, staring into space and constant picking at bed clothes; skin moist; occipital headache
11-9-49 (5th day postoperative)	1,000 cc. 10% dextrose in Hartmann's solution	98.6-90-20	140/90		Uremic frost over face; otherwise clinically same as 11-8-49; diuresis
11-10-49 (6th day postoperative)	1,000 cc. 10% dextrose in water Water and milk	101.8-110-26	140/90		Same as before, plus marked emotional instability and disorientation at times; profuse diuresis and tarry mucus from colostomy; diuresis
11-11-49 (7th day postoperative)	3,000 cc. 10% dextrose in water 1,000 cc. 5% dextrose in Hartmann's solution 500 cc. Darrow's solution	100.8-116-36		Nonprotein nitrogen 213 mg./100 cc. Chloride 544 mg./100 cc. Carbon dioxide 47 vol./100 cc. Protein 6.3 Gm./100 cc. Hematocrit 40 vol./100 cc.	Frost still present; less nervous; no mental instability
11-12-49 (8th day postoperative)	3,000 cc. 10% dextrose in water 1,000 cc. 5% dextrose in Hartmann's solution 1,000 cc. Darrow's solution 1,000 cc. milk				Marked physical inertia and mental depression and lassitude
11-13-49 (9th day postoperative)	100 Gm. protein 25% potassium chloride 12 Gm. sodium chloride 3 Gm. sodium bicarbonate 10 Gm. dextrose (daily to 11-17-49)	99.2-70-18	140/90	Nonprotein nitrogen 78 mg./100 cc. Hematocrit 40 vol./100 cc. Blood urea nitrogen 55/100 cc.	Skin and lips dry; floor of mouth moist; still depressed and listless
11-17-49 (13th day postoperative)	100 Gm. protein 4 drachms 25% potassium chloride 6 Gm. sodium chloride 4 Gm. sodium bicarbonate 3,000 cc. water (daily to 11-25-49, then high protein, low residue diet)	98.6-72-18	140/86		Gradual improvement; markedly improved mental state

[a] Daily profuse perineal discharge.
Urinary output inaccurate because of profuse perineal discharge, irrigation of Wangensteen tube with saline solution, and no way to collect the urine. The Wanganstеen suction was carried on only three days and not more than 200 to 400 cc. was collected daily in the bottle.

Slight generalized edema developed but disappeared rapidly when the salt intake was decreased.

The perineal packs were removed on the eighth postoperative day. The patient left the hospital December 28. She was up and about daily, feeling fine, gaining weight and strength, and well pleased with the surgery. On February 4, 1950, she and other members of her household were victims of an epidemic virus enteritis and hepatitis. Her case was more severe than the others, and on February 5 she became deeply jaundiced and lapsed into coma. She died twelve hours later.

The pathologic specimen taken at surgery consisted of one mass of indurated tissue, 30 cm. in its greatest diameter, in which the rectum, vulva, and urinary bladder with attached ureteral remnants could be identified. The tumor mass on cross section was seen to have invaded the vagina and the bladder. It measured 10 cm. in the greatest dimension. The involved mucosal surfaces of the vagina and bladder were shaggy and granular. On gross section the tumor mass was firm with yellow and gray areas of nodularity. Microsections revealed masses of tumor cells which varied in size and had large hyperchromatic nuclei and prominent nucleoli. These cells infiltrated the bladder, fallopian tube, and muscularis of the rectum. Sections of lymph nodes revealed inflammatory cells. No tumor cells could be found in the lymph node sections.

The pathologic diagnoses were squamous cell carcinoma, grade 4, with infiltration into the urinary bladder, vagina, rectum, and fallopian tube and inflammatory lymph nodes.

At autopsy there was no gross nor microscopic evidence of carcinoma remaining in spite of a thorough search of all areas of possible spread. Death was caused by liver failure due to infectious hepatitis or possibly to plasma serum hepatitis.

DISCUSSION

Surgical Phase.—The use of radical pelvic surgery for treatment of early carcinoma of the cervix has been revived in this country, principally by Meigs.[5] However, until Brunschwig's surgical fortitude in 1946, advanced pelvic cancer usually received palliative irradiation therapy or nothing. Brunschwig's operation for the treatment of these unfortunate patients by removing all of the involved pelvic structures is feasible because of the insidious character and the nature of spread of squamous cell carcinoma of the cervix. The result of this operation in the case herein presented was gratifying to us as well as to the patient. The most encouraging phase of this case was the complete absence of any gross or microscopic carcinoma above the brim of the pelvis, outside the operative field. Particularly remarkable was the absence of any recurrent carcinoma or metastatic carcinoma on autopsy examination three months after surgery. We therefore feel justified in offering this type of therapy to the patient who has had all possible conservative treatment for cervical carcinoma but who still shows evidence of the disease. The consequences of the radical surgery as regards fecal and urinary drainage through the colostomy should be pointed out to the patient as well as to the family. This operation should be offered and not proposed.

In the operative procedure, we believe that the bilateral extraperitoneal approach through two separate incisions is a time-consuming step and not worth while. Brown,[1] having completed a series of 23 cases, has used this method but now thinks that the bilateral inguinal approach for the extraperitoneal ligation of vessels is of no additional value unless it becomes necessary for the control of hemorrhage in preparation for the evisceration. Transperitoneal ligation of the iliac arteries and removal of retroperitoneal fat and lymphatics as part of the operation can be carried out through a midline or paramedian incision, and is preferable.

Renal Failure Phase.—The clinical course of patients with this form of renal failure may be divided into three phases: (1) the phase of shock, lasting usually a few hours; (2) the phase of renal failure, lasting usually from eight to fourteen days; and (3) the phase of recovery, consisting of (a) the profuse diuresis lasting up to one week and (b) convalescence of several weeks to several months during which polyuria abates and the renal concentrating power returns.

The fluid and salt replacement in this case were based on the average figures obtained from experience with 45 patients with this form of renal failure. The edema was thought to have been partly the result of the salt intake in the face of long standing starvation. The eventual satisfactory outcome demonstrates again the remarkable recovery power of renal tubules damaged by peripheral circulatory failure and the inadvisability of a high fluid intake during the phase of renal insufficiency.

The renal failure threatened to nullify the results of an otherwise apparently successful operation. Since it occurred subsequent to a period of shock it belonged to the syndrome resulting from tubular damage designated by Lucke as "lower nephron nephrosis." Recovery was accomplished by the use of a conservative regimen in its management. It has been the experience of one of us (E. E. M.) that 80 per cent of patients with this form of renal failure recover when such a conservative regimen is used. Patients who succumb do so usually beyond the time necessary for renal recovery and at postmortem examination reveal grave complications other than renal. For these reasons it is not believed that artificial measures for the removal of waste products from the body, such as peritoneal irrigation and the artificial kidney, are indicated in this form of uremia.

SUMMARY

A case of a successful one stage total pelvic exenteration for advanced carcinoma of the pelvis is presented. Death three months later resulting from an infectious hepatitis revealed no gross nor microscopic evidence of recurrent metastatic carcinoma.

This procedure is offered as a feasible method of treating these unfortunate patients from the standpoint of palliation, if not cure. It is believed that in selected cases such patients can be returned to full normal activity after this operation as this patient was for a time.

The complication of renal failure (lower nephron nephrosis) following prolonged shock is discussed.

The authors wish to acknowledge the excellent work of Dr. Marvin Adams, the anesthetist in this case.

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SUBMUCOUS LIPOMA OF ILEOCECAL VALVE

Case Report

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LIPOMAS of the gastrointestinal tract are of interest because of their uncommon occurrence and because of the understandable difficulty of preoperative diagnosis.

There have been reported in the literature approximately 180 cases of lipoma of the colon including the ileocecal valve. Of this total, 155 were clinical cases necessitating operative intervention; the remaining cases resulted from incidental autopsy findings.

Symptoms caused by lipomas of the colon are primarily obstructive in character, due either to the bulk of the tumor or to intussusception initiated by a pedunculated lipoma. Depending on which mechanism is present in an individual case, the duration of symptoms may extend over months to years or the onset of symptoms may be abrupt and acute. This sequence of events occurring in a middle-aged person who is found to have a filling defect of the colon on barium enema examination generally leads to a diagnosis of carcinoma of the colon. Erosion of the surface of the lipoma with bleeding and secondary anemia may further justify the diagnosis of carcinoma.

Thus, the patient is operated on with a preoperative diagnosis of a malignant lesion of the colon, and in a large percentage of cases the correct diagnosis is not determined until a resection has been done and the specimen studied in the laboratory. Runyeon[7] has pointed out that of 118 cases he reviewed, 50 per cent were treated by resection of bowel and only 24 per cent had colotomy and local excision. In the remainder of the cases, the lipoma was removed through the rectum or passed spontaneously; in 4 patients only a proximal colostomy was performed. Runyeon consequently made a plea for more conservative surgery after the nature of the lesion had been definitely determined at the time of laparotomy.

With a condition as uncommon as lipoma of the colon, the incidence of cases in which the lesion is located in a particular segment of the bowel, such as the ileocecal valve, is correspondingly infrequent. There are reported in the literature 6 clinical cases[1, 2, 3, 4, 5, 6] of lipoma of the ileocecal valve and 6 autopsy cases.

The case to be reported here is of a woman who had had symptoms for a relatively short time and upon whom a conservative surgical procedure was done.

CASE REPORT

The patient was a 62 year old, white housewife who was first seen in consultation on April 5, 1948. Four months previously she began to have occasional episodes of mild postprandial abdominal discomfort. Six weeks prior to examination the attacks became more severe and induced the patient to seek medical advice. The attacks always occurred following the ingestion of food and consisted of definite abdominal distention and a feeling of fullness especially in the right side of the abdomen. There was no nausea nor vomiting. Enemas were ineffectual in bringing about about relief from the pain. The patient had a bowel movement daily without the use of laxatives, and there had been no change of bowel habits nor melena. There had been no change in body weight.

The patient had two children. Menopause was induced in 1932 by the use of radium. In 1940, an appendectomy, perineorrhaphy, and hemorroidectomy had been performed. Otherwise, the past medical history was essentially negative.

A sister of the patient had died with carcinoma of the stomach; no other facts were of significance in the family history.

The patient was a well-preserved woman weighing 133 pounds. Blood pressure was 120 mm. of mercury systolic over 70 mm. diastolic. Temperature was 98.2 F. and the pulse rate was 82 per minute. Examination of the heart and lungs gave normal findings. The abdomen was rounded but not tympanitic. A well healed right McBurney scar was present. No masses were palpable nor was any area of

tenderness elicited. Results of vaginal and rectal examinations were within normal limits.

Hemoglobin was 106 per cent with 4,590,000 red blood cells and 6,800 white blood cells. Report of the urinalysis was physiologic.

Barium enema examinations of the colon were reported by Dr. H. E. Holtz as follows:

"March 15, 1948. There is a rounded defect adjacent to the ileocecal valve, apparently on the cecal side of the valve and on the medial wall of the cecum. I believe this lesion is approximately 1.5 cm. in diameter and presents all the appearances of a polyp; but a recheck in two weeks is indicated

"April 1, 1948. A recheck examination of the colon still shows the rounded defect at the junction of the ileocecal valve and cecum. There is no essential change since the previous examination. I am convinced there is some sort of pathologic condition in this location."

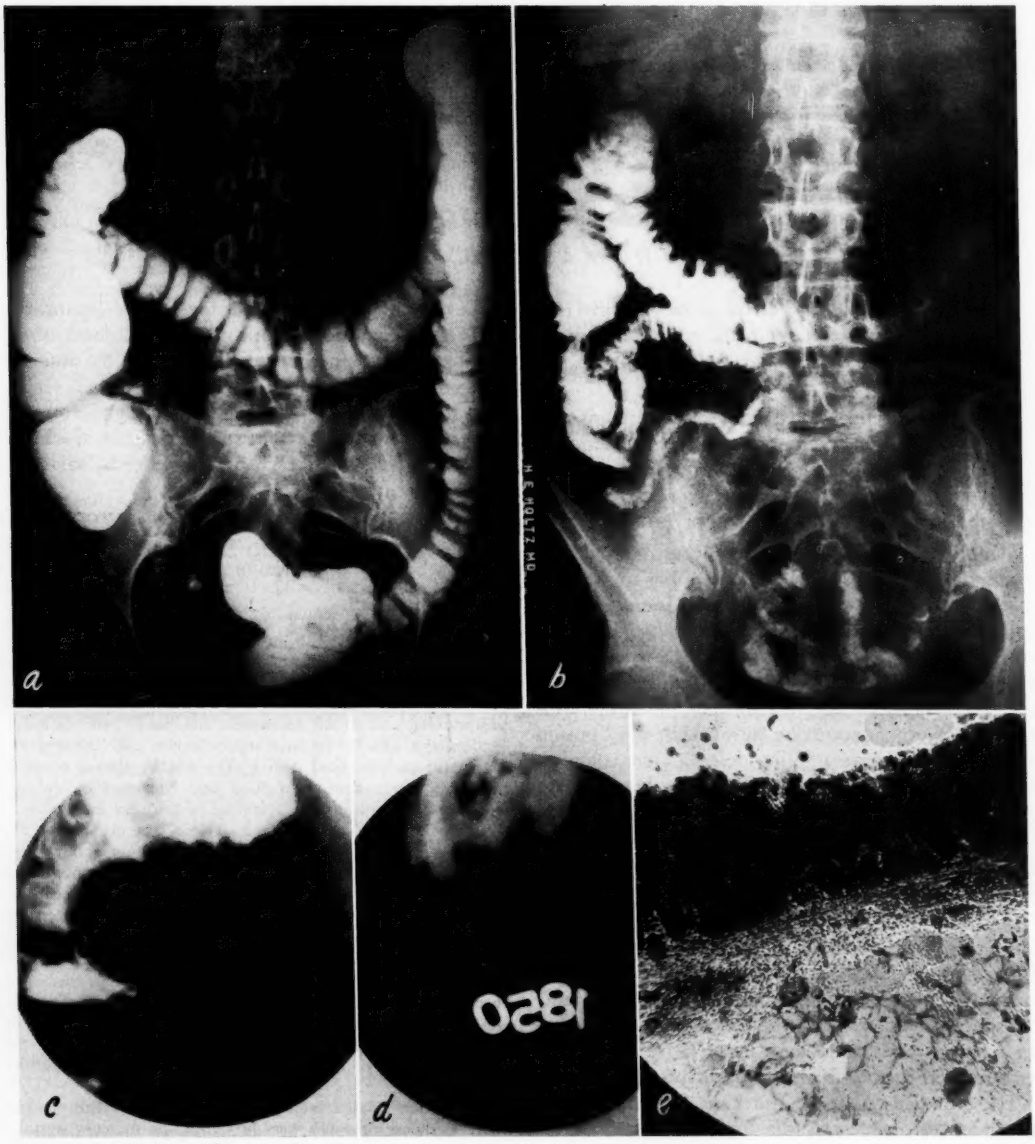

FIG. 1a. Preoperative roentgenogram taken after a barium enema and showing a defect on the medial wall of the cecum in the region of the ileocecal valve.

b. Roentgenogram after a barium enema taken one year postoperatively. Reflux of barium through the anastomosis prevents good visualization of the ileocecal valve.

c and d. Preoperative spot films of the ileocecal area demonstrating a filling defect.

e. Photomicrograph of a biopsy specimen from the ileocecal valve demonstrating fat lobules lying under the bowel mucosa.

It was the opinion that laparotomy was indicated on the basis of the symptomatology and the roentgenologic evidence with a diagnosis of polyp of the cecum being the most probable.

Consequently, preoperative bowel preparation was carried out with low residue diet, saline laxative, saline irrigations, and sulfasuxidine, 12 Gm. daily for seven days.

April 21, under Pentothal, nitrous oxide, and curare anesthesia, the abdomen was entered through a right rectus muscle-splitting incision. The only abnormality encountered upon examination of the abdominal organs was located in the ileocecal region. A smooth tumor mass could be palpated on the medial wall of the cecum. Because the smooth surface suggested a benign lesion, the bowel was opened through the anterior taenia coli for direct inspection of the lesion. The lumen of the ileocecal valve was found to be narrowed by a complete ring of yellow fatty tissue. The fatty tumor mass which projected into the cecum measured approximately 3.5 by 3 by 2 cm. A specimen of the lesion was taken for biopsy, and this was reported by Dr. C. F. Pelphrey as being a submucous lipoma.

Local excision of the lipoma did not seem practical because of the likelihood of subsequent stenosis at the site. Neither did the more radical procedure of resection of the terminal ileum and right colon appear warranted because of the benignancy of the lesion and the improbability of this particular lesion causing intussusception.

Consequently, a short circuiting procedure was done by means of a side-to-side ileo-transverse-colostomy using an inner row of continuous catgut and an outer row of interrupted silk sutures.

The patient had an uneventful postoperative convalescence and was dismissed from the hospital on the twelfth postoperative day.

When the patient was reexamined a year later on April 25, 1949, she enjoyed excellent health, and no abnormal symptoms referable to the bowel could be elicited.

SUMMARY

A case in which a 62 year old woman had a submucous lipoma of the ileocecal valve is reported. The exact diagnosis was determined at the time of operation, and an ileocolostomy was performed. The functional end-result to date has been entirely satisfactory.

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NEWS

COMING MEETINGS AND CLINICS

State Medical Association of Texas, Galveston, 1951. Dr. William M. Gambrell, Austin, Pres.; Secretary, 700 Guadalupe St., Austin.

American Medical Association, San Francisco, June 26-30, 1950. Dr. Ernest E. Irons, Chicago, Pres.; Dr. George F. Lull, 535 North Dearborn St., Chicago 10, Secy.

NATIONAL AND REGIONAL

American Academy of Allergy. Dr. Will C. Sprain, New York, Pres.; Dr. Theodore L. Squier, 424 E. Wisconsin Ave., Milwaukee, Secy.

American Academy of Dermatology and Syphilology. Dr. Francis E. Senear, Chicago, Pres.; Dr. Earle D. Osborne, 71 North Street, Buffalo, N. Y., Secy.

American Academy of General Practice. Stanley R. Truman, Oakland, Calif., Pres.; Mr. Mac F. Cahal, 406 W. 34th St., Kansas City 2, Executive Secy.

American Academy of Neurological Surgery. Dr. William S. Keith, Toronto, Canada, Pres.; Dr. T. C. Erickson, 1300 University Ave., Madison 5, Wis., Secy.

American Academy of Ophthalmology and Otolaryngology, Chicago, Oct. 8-13, 1950. Dr. Conrad Berens, New York, Pres.; Dr. W. L. Benedict, 100 First Ave. Bldg., Rochester, Minn., Secy.

American Academy of Pediatrics, Chicago, Oct. 16-19, 1950. Dr. Edward B. Shaw, San Francisco, Pres.; Dr. C. G. Grulee, 636 Church St., Evanston, Ill., Secy.

American Association for Thoracic Surgery. Dr. Edward J. O'Brien, Detroit, Pres.; Dr. Brian Blades, 901 23rd St. N. W., Washington, D. C., Secy.

American Association of Genito-Urinary Surgeons, Hershey, Pa., May 24-26, 1950. Dr. J. A. C. Colston, Baltimore, Pres.; Dr. Norris J. Heckel, 122 S. Michigan Ave., Chicago 3, Secy.

American Association of Obstetricians, Gynecologists, and Abdominal Surgeons, Hot Springs, Va., Sept. 7-9, 1950. Dr. S. A. Cosgrove, Jersey City, N. J., Pres.; Dr. L. A. Calkins, University of Kansas Medical Center, Kansas City 3, Secy.

American Cancer Society. Dr. Clifford C. Nesselrode, Kansas City, Kan., Pres.; Mr. Charles D. Hilles, 47 Beaver St., New York, Secy.

American College of Chest Physicians, San Francisco, June 22-25, 1950. Dr. Joseph C. Placak, Cleveland, Pres.; Mr. Murray Kornfeld, 500 N. Dearborn St., Chicago 10, Executive Secy.

American College of Physicians. Dr. Reginald Fitz, Boston, Pres.; Mr. E. R. Loveland, 4200 Pine St., Philadelphia 4, Secy.

American College of Radiology, San Francisco, June 25, 1950. Dr. Arthur W. Erskine, Cedar Rapids, Iowa, Pres.; Mr. W. C. Stronach, 20 N. Wacker Drive, Chicago 6, Executive Secy.

American College of Surgeons, Boston, Oct. 23-27, 1950. Dr. Frederick A. Coller, Ann Arbor, Mich., Pres.; Dr. Paul B. Magnuson, 40 E. Erie St., Chicago 11, Secy.

American Congress of Physical Medicine, Boston, Aug. 29-Sept. 1, 1950. Dr. Earl C. Elkins, Rochester, Minn., Pres.; Dr. Richard Kovacs, 2 E. 88th St., New York 28, Secy.

American Dermatological Association, Jasper National Park, Canada, June 18-22, 1950. Dr. Charles C. Dennie, Kansas City, Mo., Pres.; Dr. L. A. Brunsting, 102 2nd Ave., S. W., Rochester, Minn., Secy.

American Gastro-Enterological Association. Dr. J. Arnold Bargen, Rochester, Minn., Pres.; Dr. Dwight L. Wilbur, 655 Sutter St., San Francisco, Secy.

American Gynecological Society, White Sulphur Springs, W. Va., May 11-13, 1950. Dr. Ludwig Emge, San Francisco, Pres.; Dr. Norman F. Miller, 1313 E. Ann St., Ann Arbor, Mich., Secy.

American Hospital Association. Mr. John Hatfield, Philadelphia, Pres.; Mr. George P. Bugbee, 18 E. Division St., Chicago, Executive Secy.

American Laryngological, Rhinological, and Otological Society, San Francisco, May 25-27, 1950. Dr. Robert C. Martin, San Francisco, Pres.; Dr. C. S. Nash, 277 Alexander St., Rochester 7, N. Y., Secy.

American Neurological Association, Atlantic City, June 12-14, 1950. Dr. Henry W. Woltman, Rochester, Minn., Pres.; Dr. H. Houston Merritt, 710 W. 168th St., New York 32, Secy.

American Ophthalmological Society, Hot Springs, Va., May 31-June 2, 1950. Dr. Parker Heath, Boston, Pres.; Dr. M. C. Wheeler, 30 W. 59th St., New York 19, Secy.

American Orthopedic Association, Virginia Beach, Va., May 23-26, 1950. Dr. R. W. Johnson, Jr., Baltimore, Pres.; Dr. C. Leslie Mitchell, Henry Ford Hospital, Detroit 2, Secy.

American Pediatric Society, French Lick, Ind.. May 8-10, 1950. Dr. Phillip C. Jeans, Iowa City, Pres.; Dr. Henry G. Poncher, 1819 W. Polk St., Chicago 12, Secy.

American Proctologic Society, Los Angeles, July 1-5, 1950. Dr. Louis E. Moon, Omaha, Pres.; Dr. W. Wendell Green, 1838 Parkwood Ave., Toledo 2, Secy.

American Psychiatric Association, Detroit, May 1-5, 1950. Dr. George S. Stevenson, New York, Pres.; Dr. Leo H. Bartemeier, General Motors Bldg., Detroit, Secy.

American Public Health Association, St. Louis, Oct. 30-Nov. 3, 1950. Dr. Lowell J. Reed, Baltimore, Pres.; Dr. R. M. Atwater, 1790 Broadway, New York 19, Secy.

American Society of Anesthesiologists, Houston, Nov. 7-10, 1950. Dr. Rolland J. Whitacre, East Cleveland, Ohio, Pres.; Dr. J. E. Remlinger, Jr., 188 W. Randolph St., Chicago, Secy.

American Society of Clinical Pathologists, Chicago, Oct. 17-21, 1950. Dr. James B. McNaught, Denver, Pres.; Dr. Clyde G. Culbertson, Indiana University School of Medicine, Indianapolis, Secy.

American Surgical Association. Dr. Thomas Orr, Kansas City, Kan., Pres.; Dr. Nathan Womack, University of Iowa, Iowa City, Secy.

American Urological Association, Washington, D. C., May 29-June 1, 1950. Dr. Carl F. Rusche, Hollywood, Calif., Pres.; Dr. C. H. deT. Shivers, 121 S. Illinois Ave., Atlantic City, N. J., Secy.

Association of American Physicians and Surgeons, Houston, Oct. 5-7, 1950. Dr. Joseph C. Bunten, Pres.; Mr. Harry E. Northam, 360 N. Michigan Ave., Chicago 1, Executive Secy.

International College of Surgeons, U. S. Chapter, Cleveland, Oct. 30-Nov. 3, 1950. Dr. H. W. Meyerding, Rochester, Minn., Pres.; Dr. Arnold S. Jackson, Jackson Clinic, Madison 5, Wis., Secy.

National Tuberculosis Association. Dr. R. D. Thompson, La Vina, Calif., Pres.; Dr. H. Stuart Willis, 1790 Broadway, New York 19, Secy.

Radiological Society of North America. Dr. Warren W. Furey, Chicago, Pres.; Dr. D. S. Childs, Medical Arts Bldg., Syracuse 2, N. Y., Secy.

Southern Medical Association, St. Louis, Nov. 13-16, 1950. Dr. Hamilton W. McKay, Charlotte, N. C., Pres.; Mr. C. P. Loranz, 1020 Empire Bldg., Birmingham, Ala., Secy.

Southern Psychiatric Association. Dr. R. Finley Gayle, Jr., Richmond, Va., Pres.; Dr. Newdigate M. Owensby, Medical Arts Bldg., Atlanta, Ga., Secy.

Southern Surgical Association, Hollywood, Fla., Dec. 5-7, 1950. Dr. G. V. Brindley, Temple, Pres.; Dr. John C. Burch, 2112 West End Ave., Nashville, Tenn., Secy.

Southwest Allergy Forum. Dr. L. O. Dutton, El Paso, Pres.; Dr. Sam Sanders, 1089 Madison Ave., Memphis, Tenn., Secy.

Southwest Regional Cancer Conference, Fort Worth, Nov. 15, 1950. Secy., 209 Medical Arts Bldg., Fort Worth.

Southwestern Medical Association, Phoenix, Ariz., Oct. 26-28, 1950. Dr. I. J. Marshall, Roswell, N. Mex., Pres.; Dr. W. W. Schuessler, 1415 First National Bank Bldg., El Paso, Secy.

Southwestern Surgical Congress, Kansas City, Sept., 1950. Dr. Thomas G. Orr, Kansas City, Pres.; Dr. C. R. Rountree, 210 Plaza Court, Oklahoma City 3, Secy.

Tri-State Medical Assembly, Shreveport, La., 1950. Dr. Charles Gowen, Shreveport, Pres.; Dr. John Walter Jones, 401 E. Fifth St., Texarkana, Secy.

United States-Mexico Border Public Health Association. Dr. George W. Cox, Austin, Pres.; Dr. M. F. Haralson, 314 U. S. Court House, El Paso, Secy.

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Texas Academy of General Practice, Fort Worth, Sept. 25, 1950. Dr. H. T. Jackson, Fort Worth, Pres.; Dr. W. P. Higgins, Jr., Medical Arts Bldg., Fort Worth, Secy.

Texas Air-Medics Association, Fort Worth, May 1, 1950. Dr. C. Hansford Brownlee, Austin, Pres.; Dr. C. F. Miller, 906 Medical Arts Bldg., Waco, Secy.

Texas Association of Obstetricians and Gynecologists, Galveston, Feb. 1951. Dr. Howard Smith, Marlin, Pres.; Dr. George F. Adam, 4115 Fannin, Houston, Secy.

Texas Chapter, American College of Chest Physicians, Fort Worth, May 1, 1950. Jesse B. White, Amarillo, Pres.; Dr. Henry R. Hoskins, 514 Medical Arts Bldg., San Antonio, Secy.

Texas Club of Internists. Dr. Ghent Graves, Houston, Pres.; Dr. Hatch W. Cummings, Jr., Houston, Secy.

Texas Dermatological Society, Fort Worth, May 1, 1950. Dr. A. G. Schoch, Dallas, Pres.; Dr. W. Harris Connor, 601 Medical Arts Bldg., Houston, Secy.

Texas Diabetes Association. Dr. J. Shirley Sweeney, Gainesville, Pres.; Dr. W. N. Powell, W. Ave. F, Temple, Secy.

Texas Division, American Cancer Society. Mr. Frank C. Smith, Houston, Pres.; Mr. J. Louis Neff, 2307 Helena St., Houston 6, Executive Director.

Texas Heart Association, Fort Worth, May 1, 1950. Dr. Merritt B. Whitten, Dallas, Pres.; Miss Roberta Miller, Medical Arts Bldg., Dallas, Executive Secy.

Texas Hospital Association, San Antonio, April 25-26, 1951. Mr. Roy Wilmesmeier, Houston, Pres.; Mrs. Ruth Barnhart, 2210 Main St., Dallas, Secy.

Texas Neuropsychiatric Association. Dr. A. T. Hanretta, Austin, Pres.; Dr. David Wade, 510 Capital National Bank Bldg., Austin, Secy.

Texas Orthopedic Association, Fort Worth, May 1, 1950. Dr. Bruce Stephenson, Beaumont, Pres.; Dr. Margaret Watkins, 3629 Fairmount St., Dallas, Secy.

Texas Pediatric Society, Fort Worth, Oct. 6-7, 1950. Dr. J. E. Ashby, Dallas, Pres.; Dr. M. C. Carlisle, 1410 Austin Ave., Waco, Secy.

Texas Public Health Association, Galveston. Dr. W. R. Ross, Tyler, Pres.; Mr. Earle W. Sudderth, Dallas County Health Department, Court House, Dallas, Executive Secy.

Texas Radiological Society, Dallas. Wayne D. Ramsey, Abilene, Pres.; Dr. R. P. O'Bannon, 650 Fifth Ave., Fort Worth, Secy.

Texas Railway and Traumatic Surgical Association, Fort Worth, May 1, 1950. Dr. Joe Gandy, Houston, Pres.; Dr. W. F. Parsons, First National Bank Bldg., Fort Worth, Secy.

Texas Rheumatism Association. Dr. Howard C. Coggeshall, Dallas, Pres.; Dr. Robert H. Mitchell, 210 Medical Arts Bldg., Fort Worth, Secy.

Texas Society for Mental Health, Galveston, March 8-9, 1951. Dr. Hamilton Ford, Galveston, Pres.; Mrs. Elizabeth F. Gardner, 1617 Watchhill Road, Austin 21, Executive Secy.

Texas Society of Anesthesiologists, Fort Worth, May 1, 1950. Dr. Wilbur F. Robertson, San Antonio, Pres.; Dr. H. C. Slocum, 928 Strand, Galveston, Secy.

Texas Society of Gastroenterologists and Proctologists, Fort Worth, May 1, 1950. Dr. G. E. Brereton, Dallas, Pres.; Dr. John S. Bagwell, Medical Arts Bldg., Dallas, Secy.

Texas Society of Ophthalmology and Otolaryngology, Dallas, Dec., 1950. Dr. V. R. Hurst, Longview, Pres.; Dr. John L. Matthews, 929 Nix Professional Bldg., San Antonio, Secy.

Texas Society of Pathologists, Fort Worth, May 3, 1950. Dr. Charles Phillips, Temple, Pres.; Dr. A. O. Severance, 205 Camden, San Antonio, Secy.

Texas Surgical Society. Dr. R. J. White, Fort Worth, Pres.; Dr. Truman G. Blocker, 927 Strand, Galveston, Secy.

Texas Tuberculosis Association. Dr. Elliott Mendenhall, Dallas, Pres.; Miss Pansy Nichols, 208 E. Ninth, Austin, Executive Secy.

Texas Urological Society, San Antonio, Jan. 22, 1951. Dr. Hub E. Isaacks, Fort Worth, Pres.; Dr. John M. Pace, 428 Medical Arts Bldg., Dallas, Secy.

DISTRICT

Second District Society. Dr. James W. Rainer, Odessa, Pres.; Dr. Frank M. James, 1021 N. Whitaker Ave., Odessa, Secy.

Third District Society. Dr. C. B. Jones, Wellington, Pres.; Dr. Roy G. Loveless, 2609 Nineteenth St., Lubbock, Secy.

Fourth District Society, Brownwood, Nov. 1, 1950. Dr. Gordon F. Madding, San Angelo, Pres.; Dr. S. B. Locker, First National Bank Bldg., Brownwood, Secy.

Fifth and Sixth Districts Society, Corpus Christi, July 7-8, 1950. Dr. Franklin W. Yeager, Corpus Christi, Pres.; Dr. Foy Moody, 1611 Fifth St., Corpus Christi, Secy.

Seventh District Society. Dr. Joe W. Bailey, Austin, Pres.; Dr. John F. Thomas, 907 Capital National Bank Bldg., Austin, Secy.

Eighth District Medical Society. Dr. Leonard Johnson, El Campo, Pres.; Dr. Robert Casey, Texas City, Secy.

Tenth District Medical Society, Port Arthur. Dr. J. A. Richardson, Sr., Jasper, Pres.; Dr. Dale H. Davies, Liberty, Secy.

Eleventh District Society, Tyler, Fall, 1950. Dr. E. G. Faber, Tyler, Pres.; Dr. John M. Travis, Jr., Jacksonville, Secy.

Twelfth District Society, Cleburne. Dr. W. K. Logsdon, Corsicana, Pres.; Dr. N. C. Smith, Hillsboro, Secy.

Thirteenth District Society, Mineral Wells, Oct., 1950. Dr. R. L. Daily, Wichita Falls, Pres.; Dr. S. W. Wilson, Medical Arts Bldg., Fort Worth, Secy.

Fourteenth District Society, Paris, June 13, 1950. Dr. J. Shirley Sweeney, Gainesville, Pres.; Dr. L. W. Johnston, 502 W. College St., Terrell, Secy.

Fifteenth District Society, Texarkana, Oct., 1950. Dr. F. V. Mondrik, Longview, Pres.; Dr. Hardy Cook, Longview, Secy.

CLINICS

Dallas Southern Clinical Society, Dallas. Miss Betty Elmer, Medical Arts Bldg., Dallas 1, Executive Secy.

International Post-Graduate Medical Assembly of Southwest Texas, San Antonio, Jan. 23-25, 1951. Dr. John J. Hinchey, P. O. Box 2445, San Antonio, Secy.

New Orleans Graduate Medical Assembly, New Orleans. Dr. Woodard D. Beacham, Room 105, 1430 Tulane Ave., New Orleans 12, Secy.

North Texas-Southern Oklahoma Fall Clinical Conference, Wichita Falls. Dr. James T. Lee, Wichita Falls Clinic Hospital, Wichita Falls, Program Chairman.

Oklahoma City Clinical Society Conference, Oklahoma City, Oct. 30-Nov. 2, 1950. Mrs. Muriel R. Waller, 512 Medical Arts Bldg., Oklahoma City 2, Executive Secy.

Post Graduate Medical Assembly of South Texas, Houston, Nov. 20-22, 1950. Dr. Donald M. Paton, Secy., 229 Medical Arts Bldg., Houston.

UNIVERSITY OF TEXAS MEDICAL BRANCH

A postgraduate conference in obstetrics and gynecology was held at the University of Texas Medical Branch, Galveston, the week of April 10. The Maternal and Child Health Division of the State Health Department cooperated. Out-of-state speakers included Drs. Hugh G. Hamilton, Kansas City; Frank R. Lock, Bowman Gray School of Medicine, Winston-Salem, N. C.; Oren Moore, Charlottesville, N. C.; Ward Seeley, Wayne University Medical School, Detroit; and W. Reed Wood, Greensboro, N. C.

The construction and equipment of a hospital for tuberculous patients at the University of Texas will be financed in part by the State Board of Health, which has granted $300,000 to match funds provided by the late Mrs. Rosa Zeigler for that purpose. The new building, now in the planning stage, will have a capacity of seventy-two beds and will be arranged to include a special clinic for diseases of the chest.

Graduation exercises of the Medical Branch will be held the evening of June 2 on the Municipal Pier. Dr. William M. Gambrell, Austin, President of the State Medical Association, will be the speaker.

Recent visitors on the Medical Branch campus, most of whom have presented lectures there, include Dr. T. S. Toosy, King Edward Medical College, Lahore, Pakistan; Dr. Olaf Larsell, University of Oregon School of Medicine, Portland (Sigma Xi lecturer); Dr. Sam Clark, Vanderbilt University Medical School, Nashville; Dr. I. Costero, Cardiology Institute, Mexico, D. F.; Dr. Charles Lumsden, University of Aberdeen, Scotland; Dr. Linus C. Pauling, California Institute of Technology, Pasadena; and Col. Elbert DeCoursey, Army Medical Center, Washington, D. C.

An Alpha Kappa Kappa lectureship has been established jointly by the chapters of the medical fraternity at the University of Texas Medical Branch, Galveston, and the Baylor University College of Medicine, Houston. An annual address will be delivered at each school by a distinguished medical contributor. Dr. Andrew C. Ivy, vice-president of the University of Illinois Professional Colleges, gave the first lectures May 16 and 17.

Nu Sigma Nu on April 5 presented Dr. Warren Cole, professor of surgery at the University of Illinois, Chicago, as the inaugural lecturer in a series to be sponsored by that fraternity.

Dr. Harvey C. Slocum, professor of anesthesiology at the Medical Branch, was elected president of the Southern Society of Anesthetists when that organization met in St. Louis in April.

Wendell H. Griffith, Ph. D., professor of biochemistry and nutrition at the Medical Branch, gave the Mellon Lecture at the University of Pittsburgh School of Medicine on May 5.

Chauncey D. Leake, Ph. D., vice-president of the Medical Branch, spent several weeks recently at the Institute for Advanced Study, Princeton, N. J., in special study and conference on the early development of systems of weights and measures. He was invited to make special annotations of the ancient Egyptian medical papyri.

TEXAS SOCIETY FOR MENTAL HEALTH

In its seventeenth annual conference the Texas Society for Mental Hygiene changed its name to conform with the current national and international emphasis, substituting the word "Health" for "Hygiene."

The conference, held in Mineral Wells, April 13-14, was a working meeting. An "open hearing" began the program with an informal presentation of the most pressing mental health needs in Texas by representatives of four related areas: rural community, public health, schools, and social work. Willis Tate, dean of men at Southern Methodist University, Dallas, acted as moderator. Dr. Ruth Tiedman, professor of education at the Institute of Child Study, University of Maryland, College Park, and Dr. Paul Stevenson, chief of the State Surveys Section, Community Service Branch, National Institute of Mental Health, Washington, D. C., served as expert listeners and commented on the problems raised in the preceding discussion. These problems were examined in greater detail in successive meetings with the assistance of Dr. Tiedman, Dr. Stevenson, and Dr. Loyd Rowland, director of the Louisiana Society for Mental Health, New Orleans.

The second day of the session, attention was centered largely around ways of meeting some of the problems of the mentally ill. Dr. Margaret Gildea, practicing psychiatrist of St. Louis, was the guest consultant at a panel discussion presided over by Dr. Hamilton Ford, Galveston. Administrative personnel and social workers from the various State Hospitals and Special Schools and members of the State Vocational Rehabilitation staff formed a large part of the audiences, and in a later meeting the areas of responsibility and cooperation of these two groups were considered. Dr. Gildea spoke at dinner on "Preventive Psychiatry in the Community," emphasizing group education for parents of children with behavior problems.

Dr. John R. Rees, of the Tavistock Clinic, London, and director of the World Federation of Mental Health, closed the conference with an address on the international aspects of the mental health movements related to world peace, stressing the leadership potentialities of the United States.

In addition to adopting a new name, the Texas Society for Mental Health in business session elected officers, naming Dr. Hamilton Ford, Galveston, president; Mrs. Clarence Burke, Fort Worth, first vice-president; Dr. Warren Brown, Houston, second vice-president; William Grant, Jr., Baytown, secretary; Miss Florence Stullken, Austin, treasurer; and Dr. W. B. Cline, Jr., Corpus Christi, and the Rev. Paul Ehlinger, San Antonio, members-at-large of the executive committee. The 1951 conference will be held March 8-9 in Galveston.

STATE SCHOOL FOR CEREBRAL PALSIED ESTABLISHED

The Moody Memorial Home at Galveston has been accepted by the Board for State Hospitals and Special Schools as the first State School for Cerebral Palsied Children. The recently erected building was a gift from W. L. Moody, Jr., Galveston banker, who also gave $50,000 for helping to set up the center. The building will accommodate 80 patients with staff. Plans are being made for consultation services to be rendered by members of the University of Texas Medical Branch staff, Chauncey D. Leake, Ph. D., vice-president of the Medical Branch, has announced.

LIBRARY SECTION

PACKAGE SERVICE

The package library consists of collections of reprints and other periodical material on various subjects, prepared for lending to members of the Association. Request for packages should be addressed "Library, State Medical Association of Texas, 700 Guadalupe Street, Austin, Texas." Twenty-five cents in stamps should be enclosed with the request to cover postage and part of the expense of collecting the material. Packages are allowed to remain in the hands of the borrower for 14 days.

ACCESSIONS

The following additions were made to the Library during April:

Reprints received, 1,989.

Journals received, 281.

Books received, 25.

Surgery of Repair, by Pick, from J. B. Lippincott Company, Philadelphia.

Proceedings of the First Clinical ACTH Conference, by Mote, from Blakiston Company, Philadelphia.

Child Health Services and Pediatric Education, with Supplement, by Sisson, Wilson, and Hubbard (editors), and *Trends in Medical Education,* by Ashford (editor), from the Commonwealth Fund, New York.

Progress in Clinical Endocrinology, by Soskin, from Grune and Stratton, New York.

Varieties of Delinquent Youth, by Sheldon, from Harper & Brothers, New York.

Ankylosing Spondylitis, by Hernaman-Johnson and Law, and *Textbook of Bacteriology,* by Dougherty and Lamberti, from C. V. Mosby Company, St. Louis.

Streptomycin and Dihydrostreptomycin in Tuberculosis, by Riggins and Hinshaw, from the National Tuberculosis Association.

The Law of Medicine, Callahan and Callahan, from Oceana Publications, New York.

An Illustrated Medical Dictionary, 21st edition, by Dorland; *Medical Gynecology,* by Janney; *Manual of Cardiology,* by Dry; *Clinical Developments in Thyroidology,* by Salter; *The Nose,* by Holmes; and *Treatment in Psychiatry,* by Diethelm, from W. B. Saunders Company, Philadelphia.

The 1949 Year Book of Dermatology, by Sulzberger and Baer (editors), and *The 1949 Year Book of Orthopedics and Traumatic Surgery,* by Compere (editor), from the Year Book Publishers, Chicago.

Webster's New Collegiate Dictionary, by Merriam-Webster, from G. & C. Merriam Company, Springfield, Mass.

La Vectocardiographie, by Duchosal and Sulzer, from S. Karger, Ltd., Basle, Switzerland.

Progress in Biochemistry, by Haurowitz, and *Haemoglobin,* by Roughton and Kendrew, from Interscience Publishers, Inc., New York.

SUMMARY OF SERVICE

Local users, 68.	Borrowers by mail, 185.
Items consulted, 1,205.	Packages mailed, 188.
Items borrowed, 404.	Items mailed, 811.

Film loans, 83.

MOTION PICTURE FILM LIBRARY

Motion picture films on medical subjects, 16 mm., both silent and sound, some in color, and suitable for either medical or lay audiences, are available for loan to county medical societies, hospital staffs, or individual physicians, on request. Borrowers will be required to pay only the cost of shipment of the films, by express, with insurance, and for any damage to films in the hands of the borrower.

Request for films should be addressed to "Motion Picture Film Library, State Medical Association of Texas, 700 Guadalupe Street, Austin, Texas." A list of available films, with descriptions, will be furnished on request.

The following motion picture films were loaned by the Film Library during April:

Accent on Use (National Foundation for Infantile Paralysis)—Junior High P.T.A., Ranger, and Second Baptist Church, Ranger.

Accident Services (British Information Services)—San Patricio-Aransas-Refugio Counties Medical Society, Taft.

Analgesia, Continuous Caudal (Becton, Dickinson & Company)—Austin Anesthetists, Austin.

Anemias, The (Lederle Laboratories, Inc.)—Dr. James R. Fish, Electra.

Anesthesia, Novocain, In Obstetrics (Winthrop Chemical Company)—Dr. C. E. Ginther, Bishop, and Bastrop Clinic, Bastrop.

Anesthesia, Regional (Winthrop Chemical Company)—Austin Anesthetists, Austin, and Bastrop Clinic, Bastrop.

Another to Conquer (Texas Tuberculosis Association)—San Angelo Medical and Surgical Clinic, San Angelo.

Appendicitis in Childhood (Mead Johnson)—Hardeman-Cottle-Foard-Motley Counties Medical Society, Quanah.

Appraisal of the Newborn (Mead Johnson)—Scott and White Clinic, Temple.

Ascorbic Acid and Scurvy (Mead Johnson)—Southwestern Medical School, Dallas.

Behind the Shadows (Texas Tuberculosis Association)—Junior High P.T.A., Ranger, and Baptist Church School, Ranger.

Breech Extraction with Forceps (Mead Johnson)—Crane-Upton-Reagan Counties Medical Society, Big Lake.

Bronchial Asthma (E. Fougera & Company)—State Tuberculosis School of Nursing, Sanatorium.

Cancer: Problem of Early Diagnosis (American Cancer Society)—Parent-Teachers Association, Crystal City.

Cardio-Vascular Anomalies, Congenital, Amenable to Surgery (Mead Johnson)—Bastrop Clinic, Bastrop.

Cataract Surgery (Dr. R. K. Daily)—Dr. Henry Ricci, San Angelo.

Cesarean Section, Low Cervical (Mead Johnson)—Scott and White Clinic, Temple.

Choose to Live (U. S. Public Health Service and American Cancer Society)—Camera Club, Lubbock, and Electra Medical Clinic, Electra.

D. D. T., The Story of (British Information Services)—Gonzales Public Schools, Gonzales.

Doctor Speaks His Mind, The (American Cancer Society)—Delphian Study Club, Lamesa; Electra Medical Clinic, Electra; and Parent-Teachers Association, Crystal City.

Dysmenorrhea, Primary (G. D. Searle & Company)—Hale County Cooperative Hospital, Hale Center.

Edema—Cardiac and Renal (Winthrop Chemical Company)—Dr. R. W. Loveless, Bastrop.

Esophagogastrostomy, Supra-Aortic, for Carcinoma of the Midportion of the Esophagus (Dr. Philip Thorek)—Drs. Hyslop and Hyslop, Del Rio.

Feeding the Infant During the First Year (Mead Johnson)—Department of Pediatrics, Southwestern Medical School, Dallas.

Gastrectomy, Safer (Billy Burke Productions)—San Patricio-Aransas-Refugio Counties Medical Society, Aransas Pass.

Golden Glory (Standard Brands)—"39" Study Club, Newcastle.

Health Is A Victory (American Social Hygiene Association)—Gonzales High School, Gonzales.

Heart Disease, Oxygen Therapy in (Linde Air Products)—Taylor Clinic, Lufkin, and University of Texas Medical Branch, Galveston.

Hematology, Animated (Armour & Company)—St. Johns Hospital Staff, San Angelo.

Hepatitis, Observation on (Mead Johnson)—Department of Pediatrics, Southwestern Medical School, Dallas.

Human Sterility (Winthrop Chemical Company)—St. Mary's Hospital Staff, Port Arthur.

Hysterectomy (Mead Johnson)—Crane - Upton - Reagan Counties Medical Society, Big Lake.

In Daily Battle (National Foundation for Infantile Paralysis)—Gonzales Public Schools, Gonzales.

Infantile Paralysis, Your Fight Against (National Foundation for Infantile Paralysis)—P.T.A., Second Baptist Church, Ranger, and Junior and Senior High School Students, Lamesa.

Lesions of Vulva, Vagina and Cervix (Dr. Karl Karnaky)—Dr. R. W. Loveless, Bastrop, and Hale County Cooperative Hospital Staff, Hale Center.

Malaria (British Information Services)—Scott and White Hospital School of Nursing, Temple, and St. Paul's Hospital School of Nursing, Dallas.

New Horizons (National Foundation for Infantile Paralysis)—Junior High and Senior High School Students, Lamesa, and Dr. Louis J. Levy, Fort Worth.

Oxygen Therapy Procedures (Linde Air Products)—Taylor Clinic, Lufkin.

Parkinsonism, Post-Encephalitic (Lederle Laboratories)—Scott and White Hospital School of Nursing, Temple, and University of Texas Medical Branch, Galveston.

Pneumonia (Mead Johnson)—State Tuberculosis School of Nursing, Sanatorium.

Polio—Diagnosis and Management (British Information Services)—Drs. Hyslop and Hyslop, Del Rio.

Portacaval Shunt for Portal Hypertension (Dr. Philip Thorek)—Drs. Hyslop and Hyslop, Del Rio.

Pregnancy, Multiple (Mead Johnson)—Scott and White Clinic, Temple.

Premature Infant, Care of (Mead Johnson)—Scott and White Clinic, Temple.

Psychiatry in Action (British Information Services)—"39" Study Club, Newcastle.

Question in Time, A (Texas State Health Department)—Delphian Study Club, Lamesa; Civic League, Ranger; and Second Baptist Church, Ranger.

Red Wagon (Swift & Company)—Dr. C. G. Goddard, Bastrop.

Rickets and Scurvy, Incidence of (Mead Johnson)—Southwestern Medical School, Dallas.

Roentgen Pelvimetry (Mead Johnson)—Dr. Russell J. Catalano, Beaumont, and University of Texas Medical Branch, Galveston.

Spontaneous Delivery (Mead Johnson)—Florence Nightingale Maternity Hospital, Dallas.

Strabismus Surgery (Drs. Daily)—Dr. Henry Ricci, San Angelo.

TB, This Is (Texas Tuberculosis Association)—Dr. Gordon F. Madding, San Angelo.

Techniques of Injection (Becton, Dickinson & Company)—Student Film Committee, University of Texas Medical Branch, Galveston.

They Do Come Back (Texas Tuberculosis Association)—Junior High P.T.A., Ranger, and Baptist Church School, Ranger.

Time Is Life (American Cancer Society)—Gonzales High School, Gonzales.

Traitor Within (American Cancer Society)—Gonzales Public Schools, Gonzales, and Alamo Heights Physical Education Department, San Antonio.

Trichomonal and Monilial Vaginitis (G. D. Searle & Company)—Hale County Cooperative Hospital, Hale Center.

Uterosalpingography (E. Fougera & Company)—Dr. Russell J. Catalano, Beaumont.

Vagotomy for Ulcerative Colitis (Dr. Philip Thorek)—Dr. C. G. Goddard, Bastrop.

Varicose Veins and Their Complications (Becton, Dickinson & Company)—Dr. C. G. Goddard, Bastrop.

Varicose Veins, Treatment of (G. D. Searle & Company)—Hardeman-Cottle-Foard-Motley Counties Medical Society, Quanah; Providence Hospital Staff, Waco; and Dr. C. G. Goddard, Bastrop.

When Bobby Goes to School (Mead Johnson)—P.T.A., Hale Center.

You Can Help (Texas Tuberculosis Association)—P.T.A., Ranger.

NEW MOTION PICTURES FOR THE FILM LIBRARY

The Motion Picture Film Library of the State Medical Association announces the acquisition of the following films, which are now available for loan:

MS 2104. *They Also Serve* (1949). 16 mm., sound, black and white, running time 17 minutes. (Prepared in 1949 by the American Medical Association in collaboration with a committee of technical advisers representing the United States Army, American Red Cross, and the United States Public Health Service. Produced by Jam Handy Organization through a grant from the Beckton-Dickinson Foundation.) This incentive type film was made primarily for presentation to physicians through their state and county medical societies and hospital staff meetings. It may also be used by physicians to show civic administrators and community groups the broad responsibilities of physicians during disasters. The film is designed to serve as an introduction to the subject of organization of medical and health services for disaster and to stimulate study of the role the civilian medical profession must assume in peacetime, in order to insure the systematic and successful response by medical and other health services in disaster situations, particularly in war. By visualizing some of the worst disaster situations, "They Also Serve" indicates some of the complexities ahead in adapting medical plans to all administration and services of the community or those services to medical activities. This is not a training film or a detailed presentation of techniques. It does not attempt to answer any of the questions that can be normally answered only after prolonged considerations. It will, however, help provide the motivation and stimulation so important in organizing any worth-while program. A brochure designed for use by discussion group leaders has been prepared and is available on request.

MS 0032. *You Can Help* (1950). 16 mm., sound, running time, 10 minutes. (Available through the courtesy of the Texas Tuberculosis Association and the National Tuberculosis Association.) Superb narration, animated drawing, and action photography are combined to tell the story of the

tuberculosis association. The film makes clear that the primary job is to help everyone in the community realize what he can do about tuberculosis for his own protection and that of others. It clarifies the relationship of the local association to the state and national associations.

MS 2107. *Coming Home* (1950). 16 mm., sound, running time, 15 minutes. (Available through the courtesy of the Texas Tuberculosis Association and the National Tuberculosis Association.) This film is the story of a man's breakdown because of tuberculosis, his reactions and fears for his family on being told of his condition, his final acceptance of sanatorium care, and his return from the sanatorium back to his job.

MSC 2111. *Management of the Failing Heart* (1948). 16 mm., sound, color, running time, 35 minutes. (Available through the courtesy of Varick Pharmacal Company, New York.) Impairment of heart function due to auricular fibrillation, constrictive pericarditis, and pericardial effusion and effects on the respiratory system are shown. The management of the patient in heart failure shows the value of properly instituted bed rest and how salt restriction maintains the proper extracellular fluid balance to reduce edema. Effects of mercurial diuretics and the modern digitalis glycoside "Digitaline Nativelle" are evaluated.

MC 0052. *Pyloric Stenosis (Congenital), Surgical Treatment* (1949). 16 mm., silent, color, running time, 15 minutes. (Available through the courtesy of Philip Thorek, M. D., Chicago.) This film reveals the surgical treatment for a congenital pyloric stenosis in a 3 week old boy. Preoperative roentgenograms are shown, and the anesthesia is discussed. The surgery consists of the removal of a wedge-shaped segment of thickened pyloric musculature down to, but not through, the mucosa. A new test for patency of the pylorus is demonstrated. Postoperative views of the patient are also shown.

MC 0046. *Carcinoma of the Lower End of the Esophagus, Surgical Treatment* (1947). 16 mm., silent, color, running time, 42 minutes. This case presents the extension of a carcinoma of the cardiac end of the stomach into the esophagus. A transthoracic partial esophagogastrectomy is performed with an end-to-side esophagogastrostomy. Roentgen-ray studies and the patient's postoperative course amplify the film.

MC 0045. *Vagotomy for Ulcerative Colitis* (1950). 16 mm., silent, color, running time, 15 minutes. (Available through the courtesy of Philip Thorek, M. D., Chicago.) A new approach to the treatment of fulminating idiopathic, nonspecific, ulcerative colitis is presented in the form of a transabdominal bilateral vagotomy. Postoperative results and roentgen-ray studies amplify the film.

MC 0053. *Transthoracic Esophageal Diverticulectomy* (1948). 16 mm., silent, color, running time, 23 minutes. (Available through the courtesy of Philip Thorek, M. D., Chicago.) The patient presents a large diverticulum situated immediately above the diaphragm. A one-stage diverticulectomy with immediate repair of the esophagus is presented. This procedure was accomplished transthoracically and demonstrates the value of an anatomic area described as the esophageal triangle.

MC 0054. *Megacolon, Total Colectomy with Ileoproctostomy for (Hirschsprung's Disease)* (1948). 16 mm., silent, color, running time, 30 minutes. (Available through the courtesy of Philip Thorek, M. D., Chicago.) This is an unusual case of neglected Hirschsprung's disease. The patient is a 12 year old child who has been suffering with obstipation and distention since the first year of life. On his entrance, it was necessary to break up in the rectum a fecal impaction which produced a complete large bowel intestinal obstruction. Two weeks later, complete colectomy with a lateral ileoproctostomy was performed. A postoperative roentgenogram reveals part of the small bowel resembling a normal colon.

MC 0044. *Breast Plastic: One Stage Operation for Pendulous Breasts* (1950). 16 mm., silent, color, running time, 30 minutes. (Available through the courtesy of Philip Thorek, M. D., Chicago.) This film depicts a one-stage operation which is utilized as a plastic procedure for pendulous and hypertrophied breasts. Free transplantation of the nipples is demonstrated, and the scars are so placed as to render them practically invisible. The technique, as well as a group of illustrative cases, is shown. Immediate and five-year postoperative results are given.

MC 0055. *Hemicolectomy for Carcinoma of the Right Side of the Colon (One-Stage Procedure)* (1950). 16 mm., silent, color, running time, 22 minutes. (Available through the courtesy of Philip Thorek, M. D., Chicago.) This film reveals the surgical treatment for adenocarcinoma of the ascending colon. The patient is a 56 year old man who presented a nonobstructing lesion of the right side of the large bowel. Following mobilization of the ascending colon in the proper avascular cleavage plane, the last 6 inches of ileum, cecum, ascending colon, hepatic flexure, and the proximal half of the transverse colon are removed. An "aseptic" end-to-end ileotransverse colostomy was performed. Preoperative and postoperative roentgenograms and the patient one year postoperatively are shown.

MC 0056. *Coarctation of the Aorta, Surgical Treatment* (1949). 16 mm., silent, color, running time, 30 minutes. (Available through the courtesy of Philip Thorek, M. D., Chicago.) This film shows the surgical repair for coarctation of the aorta in which the coarctate area was severed and the proximal end of the aorta was ligated. The subclavian artery was divided and its distal end was ligated. An end-to-end anastomosis between the proximal end of the subclavian artery and the distal end of the aorta completed the operation. Roentgenograms, diagrams, and postoperative views amplify the film.

MSC 2106. *Anesthesia with Vinethene* (1950). 16 mm., sound, color, running time, 25 minutes. (Available through the courtesy of Merck and Company, Inc., Rahway, N. J.) This film is suitable for anesthesiologists and professional groups interested in anesthesia. It explains visually and by narration the precautions to be taken in the handling of Vinethene and some of the technical points to be observed for its proficient administration. The method of administration alone for short medical and dental operative procedures, as an induction agent prior to ethyl ether, and as a complement to nitrous oxide-oxygen, is demonstrated.

MS 0048. *Be Your Age.* 16 mm., sound, running time, 11½ minutes. (Available through the courtesy of the Metropolitan Life Insurance Company, New York.) The dramatic story of middle-aged, overweight John's recovery from a heart attack and his consequent adjustment to living with a handicapped heart is presented. Roentgenographic motion pictures show how the normal heart acts when it rests and when it works. Emphasis is given to the fact that heart disease is not necessarily fatal.

MSC 0049. *Proof of the Pudding.* 16 mm., sound, color, running time, 10 minutes. (Available through the courtesy of the Metropolitan Life Insurance Company, New York.) This is a dramatic presentation of the essentials of good nutrition and of the relation between diet and health. Laboratory scenes illustrate the role of nutrition research. Classification and functions of food are presented through animation and allegory.

MSC 0050. *Once Upon a Time.* 16 mm., sound, color, running time, 10 minutes. (Available through the courtesy of the Metropolitan Life Insurance Company, New York.) In this animated cartoon on the subject of street and highway safety, well-known fairy tale and Mother Goose characters

become involved in present-day types of street and highway accidents through the machinations of the two bad goblins, "Carelessness" and "Discourtesy." The film ends with emphasis on safe driving methods.

M 0037. *Intracranial Injuries of the Newborn* (1930). 16 mm., silent, running time, 16 minutes. (Available through the courtesy of Mead Johnson & Company, Evansville, Ind.) This film depicts the pathology, symptomatology—immediate and remote, prophylaxis, and therapeutic management of intracranial damage of the newborn child.

M 0041. *Pediatric Anomalies* (1933). 16 mm., silent, running time, 11 minutes. (Available through the courtesy of Mead Johnson & Company, Evansville, Ind.) This film was made by Dr. G. C. Richardson and Dr. W. B. Serbin of Northwestern University Medical School and Wesley Hospital, Chicago. The following conditions are discussed: hydrocephalus, meningocele, anencephalus, cyclops, and double monster.

M 0042. *Obstructive Laryngitis* (1934). 16 mm., silent, running time, 9 minutes. (Available through the courtesy of Mead Johnson & Company, Evansville, Ind.) This film illustrates and discusses the diagnosis and treatment of obstructive laryngitis.

M 0043. *Tuberculosis in Childhood* (1934). 16 mm., silent, running time, 11 minutes. (Available through the courtesy of Mead Johnson & Company, Evansville, Ind.) This film emphasizes the contagiousness and the importance of the early diagnosis of tuberculosis in children and young adults. It stresses the fact that every effort should be directed toward (1) preventing first infection, if possible, and (2) avoiding reexposure if first infection has occurred.

M 0047. *Allergy* (1935). 16 mm., silent, running time, 50 minutes. (Available through the courtesy of Mead Johnson & Company, Evansville, Ind.) This film was made by Dr. Bret Ratner of the Department of Pediatrics and Immunology, New York University College of Medicine, New York, and gives a reasonably complete discussion of the subject of anaphylaxis and allergy.

MS 2110. *Dwarfism* (1950). 16 mm., sound, running time, 45 minutes. (Available through the courtesy of Mead Johnson & Company, Evansville, Ind.) This film, made by Dr. S. Z. Levine, is a discussion of the various clinical types of dwarfism, illustrated with appropriate photographs of patients, charts, and case histories. It represents a thorough and scientific coverage of the field of dwarfism and should be especially interesting to senior medical students, pediatricians, and interested general practitioners. Dr. Levine's delivery and the photography are excellent.

MS 2105. *A Question in Time* (1950). 16 mm., sound, running time, 22 minutes. (Available through the courtesy of the American Cancer Society, Texas Division, Houston.) This film both asks and answers questions about cancer which are most commonly addressed to doctor-speakers by lay audiences. It therefore should prove invaluable on those occasions when it is impossible to secure a doctor speaker for a general audience. The directness and simplicity with which the doctor in the picture reassures his patients and answers their questions gives the film a sympathetic and understanding quality which makes it a particularly effective educational movie. The film is built around the theme that adults, as well as children, can let their imaginations lead them astray.

MC 2103. *Bone Marrow* (1948). 16 mm., silent, color, running time, 45 minutes. (Available through the courtesy of Armour Laboratories, Chicago.) This motion picture presents current knowledge of normal and pathologic bone marrow in a clear and authoritative manner. The development of the subject is arranged under appropriate headings, beginning with general considerations of normal bone marrow and progressing through embryology and development of bone marrow study to the pathology of bone marrow. Diagnosis and treatment of disorders of the blood and blood-forming organs are summarized. Emphasis is placed on the indications for sternal marrow aspiration and the dangers and limitations of this type of examination. This film should be especially interesting to internists, residents, and interns and would serve as a valuable supplement in courses in hematology for medical and postgraduate students.

MS 0051. *On Our Own* (1949). 16 mm., sound, running time, 14 minutes. (Available through the courtesy of the National Foundation for Infantile Paralysis, New York.) This film shows the physical phase of rehabilitation from the patient's standpoint. It provides useful orientation material for physicians and is of help to them in directing students of orthopedic nursing, therapists, nurses, attendants, and the patients themselves.

MSC 2109. *Red Wagon* (1949). 16 mm., sound, color, running time, 45 minutes. (Available through the courtesy of Swift and Company, Chicago.) This film is historical, entertaining, and educational, with an all Hollywood cast. It shows how the young Swift & Company grew with a young nation, the opening of the West, Old Chicago, early railroading, and cowboys around the campfire. It is full of music and color. The film is suitable for grade and high school students, civic clubs, and so forth.

M 2108. *Child Study—Life History of Mary* (1948). 16 mm., silent, running time, 45 minutes. (Available through the courtesy of the film's director and producer, Dr. Margaret E. Fries, New York.) This film is accompanied by an instructor's guide and is suitable for psychiatrically-oriented groups. The guide tells the history of Mary from her mother's pregnancy to her eleventh year, and the film scenes are from birth to 7 years. It depicts a psychoneurosis with compulsive trends in the making. It is part of a research on integrated development carried on in the hospital and the prenatal and well-children's clinics of the New York Infirmary.

MS 0057. *About Faces.* 16 mm., sound, running time, 10 minutes. (Available through the courtesy of the Federal Security Agency, Public Health Service, Washington, D. C.) This is a semidramatic film which tells the story of how Danny Smith takes care of his teeth and the results of inadequate dental care. The commentary is by Lowell Thomas.

BOOK NOTICES

[1]The Eye and Its Diseases

Conrad Berens, M. D., F.A.C.S., Managing Director of The Ophthalmological Foundation, Inc.; President, Snyder Ophthalmic Foundation; President, American Academy of Ophthalmology and Otolaryngology; Diplomate and Former Member, American Board of Plastic Surgeons; President, Pan American Association of Ophthalmology; Formerly President of the Section on Ophthalmology, American Medical Association; Fellow of the American Ophthalmological Society. Second edition. Cloth, 1,092 pages. $16. Philadelphia and London, W. B. Saunders Company, 1949.

Thirteen years after the original publication, this book has been thoroughly revised. All of the existing chapters have been brought up to date, and subjects of recent interest or of increasing importance have been included as additional chapters, making this book once again one of the best single-volume textbooks of ophthalmology. The book is composed of chapters written independently by an impressive roster of authors and deals with most of the subdivisions of ophthalmology. Most of the chapters are written in a general, comprehensive style; however, they are frequently lacking in scientific detail and often have no bilateral discussions of

[1]*Fred M. Wilson, M. D., Austin.*

controversial issues. Unfortunately, these desirables have often suffered exclusion because of the attempt to combine brevity with comprehensive scope.

Much of the new or revised material is praiseworthy. Leopold has handled exceptionally well certain aspects of physiology. Kronfeld's chapter on tonometry and Uribe Troncoso's discussion of gonioscopy are notable contributions to the second edition, as are chapters by Thygeson, Ambrogi and Wilder, Pugh, Lancaster, Zeeman, and others. The book resolves a large literature and much authoritative opinion into an easily digestible form. It therefore finds its greatest utility in the hands of those whose time or interest requires a certain conciseness of expression, particularly ophthalmology students, interns, and residents, and those on the fringes or outside the specialty of ophthalmology. It is not restricted to such readers, however, since the full-time ophthalmologist likewise will find this book useful. The new, two-column layout is easy to read, and the format has been noticeably improved.

[2]Poliomyelitis

National Foundation for Infantile Paralysis. Cloth, 360 pages. $5. Philadelphia, London, Montreal, J. B. Lippincott Company, 1949.

This comprehensive monograph deals with all aspects of poliomyelitis. The ten sessions of the International Poliomyelitis Conference are presented in chapters divided according to special aspects of the subject.

The material is presented by authors who are well known for contributions in their respective fields. The editors have succeeded in correlating the factual and hypothetical literature in an interesting and stimulating manner.

Each ramification of poliomyelitis from histopathology to mental rehabilitation of the individual is elucidated in a detailed but readable manner. The essayists have condensed lengthy subjects in an excellent manner. The discussion groups are appropriate and informative. All variations in opinions and treatment techniques are presented by their respective proponents. The current accepted procedures can be ascertained easily.

In this commendable addition to medical literature, the reader finds a condensation of essential knowledge of the subject. The minutiae are deleted but can be found in the extensive bibliographies accompanying each phase of the subject. The book should be read, studied, and retained for reference.

[3]X-Ray Treatment, Its Origin, Birth and Early History

Emil H. Grubbe, B. S., M. D., F.A.C.P., Charter Member and Emeritus Member of the Radiological Society of North America; Charter Member of the American Roentgen Ray Society; Diplomate of the American Board of Radiology; Associate Fellow of the American Medical Association; Emeritus Member of the Illinois State Medical Society; and Member of the Chicago Medical Society. Cloth, 153 pages. $3. Saint Paul and Minneapolis, Bruce Publishing Company, 1949.

The aim of this monograph is to establish the fact that x-ray treatment actually had its beginning January 27, 1896, when Grubbe, then a medical student, demonstrated to a number of physicians in a medical college the detrimental cumulative effects to his left hand caused by long and frequent exposure to this new physical agent in the manufacture and use of Crookes's tubes. One of the physicians suggested that this physical agent might be able to destroy malignant disease and urged Grubbe to expose one of his patients, who was suffering from a carcinoma of the breast. The personal records of the author indicate that he was the first to apply x-ray for therapeutic purposes to a patient with breast carcinoma, January 29, 1896, and the next day to a case of lupus vulgaris. Because Grubbe was a layman at the time, this treatment was not recorded in the medical literature. On the basis of these facts he published a paper in *Radiology* in 1933 entitled, "Priority in the Therapeutic Use of X-ray."

[4]Haemolytic Disease of the Newborn

M. M. Pickles, D. M., Nuffield Graduate Assistant in Clinical Pathology, Radcliffe Infirmary, Oxford. Cloth, 181 pages. $4.50. Springfield, Ill., Charles C. Thomas, 1949.

This excellent monograph covers the rather complicated, and at times controversial, subject of erythroblastosis fetalis admirably. The author presents in an understandable manner the present status of the pathogenesis, diagnosis, and treatment of erythroblastosis. The only omission that the reviewer could find was the failure to discuss the role of female donors in exsanguination transfusions.

[5]Stedman's Medical Dictionary

Norman Burke Taylor, M. D., F.R.S.C., F.R.C.S. (Edin.), F.R.C.P. (Can.), M.R.C.S. (Lon.), University of Western Ontario and formerly of the University of Toronto. Seventeenth revised edition. Fabrikoid, 1,361 pages. $8.50. Baltimore, Williams & Wilkins Company, 1949.

This is another of the currently available and recently revised dictionaries, edited by a distinguished scientist and editor. Professor Taylor is probably advisedly placed with respect to editing a medical dictionary, since he is a physiologist and a co-editor of a widely used textbook upon this basic subject. In the preface to this edition of the dictionary he relates of work "given to cutting out bad words and revising the old definitions, as well as to the addition of new words."

A small test to demonstrate such pruning was applied to a group of words related to psychiatry, a specialty embracing terms frequently difficult for this reviewer. In a group of seven terms (all commencing with the prefix "ideo-"), it was found that eighty-two words were used to define them. In another contemporary dictionary, ninety-three words were used to define the same seven terms, and there were five additional words of the same group not present in Stedman's. Whether these terms not defined in Stedman's should have been included cannot be settled by the reviewer, but the illustration is in support of the editor's remarks. Another example of more meaningful accuracy was discovered in a comparison of definitions of the word "gonioscope." The Stedman's version is correct, whereas that from another dictionary did not seem appropriate.

The printing and general arrangement is attractive, and the size of this volume is such that it is not excessively bulky. This latest edition of an established work should again receive acceptance as a useful and easily consulted source.

[6]Green's Manual of Pathology

Revised by H. W. C. Vines, M. A., M. D., Professor of Pathology, University of London; Dean, Charing Cross Hospital Medical School. Seventeenth edition. Cloth, 1,200 pages. $8. Baltimore, Williams & Wilkins Company, 1949.

The fact that this book is now in the seventeenth edition is indicative of the high esteem in which it has been held. The title "Manual of Pathology" may be misleading since the term "manual" is used in this country to indicate a small book; this edition has 1,200 pages with many illustrations

[2]*S. C. Dunn, M. D., Kingsville.*
[3]*Roy G. Giles, M. D., San Antonio.*
[4]*Clifford Thorne, M. D., Austin.*
[5]*Sam Key, Jr., M. D., Austin.*
[6]*R. H. Rigdon, M. D., Galveston.*

both in black and white and in color. The illustrations usually are good. The outline of this textbook follows that of others on pathology edited in America. The author comments on the fact that the trends are obvious enough and doubtless in due time will lead to a new type of textbook with a broader outlook and with less insistence on the volume of detail which suggests to the student an unyielding fixity in processes which are essentially dynamic.

The author has failed to include a discussion of many of the more recent advances which have been made in this country in certain fields of pathology. This may be observed in the discussion of the diseases produced by viruses and fungi, and in the chapter on inflammation. Another feature which is omitted in this book, and which appeals to many, is the inclusion of pertinent references at the end of each chapter. These serve as additional sources of information on specific topics.

The subject of pathology as usually presented to sophomore students is covered adequately by this text; however, graduates in medicine may not find this book too stimulating.

[7]1949 Year Book of Radiology

Fred Jenner Hodges, M. D., Professor and Chairman, Department of Roentgenology, University of Michigan; John Floyd Holt, M. D., Associate Professor, Department of Roentgenology, University of Michigan; and Isadore Lampe, M. D., Associate Professor, Department of Roentgenology, University of Michigan, Editors. Cloth, 453 pages. $6.50. Chicago, Year Book Publishers, 1949.

The "1949 Year Book of Radiology" is a comprehensive review of the radiologic literature of the year. Representative publications on each subject are reviewed and the content concisely presented. No attempt is made to present all the articles dealing with a subject, but the editors have themselves reviewed the entire radiologic literature and carefully selected representative contributions on every subject. Contributions that are outstanding are followed by editorial comment. Where methods or conclusions are unorthodox, these discrepancies are pointed out.

The book is divided into diagnostic and therapeutic parts and so organized by subjects that it serves as a quick reference to the current literature on any radiologic subject. An author index refers to the outstanding contribution of any one person.

A unique feature is a test of knowledge of the current literature and of ability to recognize and retain important information after reading the book. This test is in the form of a list of twenty concise questions followed by pertinent references.

The year book is essential for everyone who wishes to become familiar with, or keep abreast of, advances in radiology. It is especially helpful for those whose reading time is limited.

[8]Clinical Pathology, Application and Interpretation

Benjamin B. Wells, M. D., Ph. D., Professor of Medicine, University of Arkansas, School of Medicine, Little Rock, Ark. Cloth, 397 pages. $6. Philadelphia and London, W. B. Saunders Company, 1950.

This small compendium of interpretative data represents "field that was clinical pathology" in the preface, but hastens a new venture in its class. Wells laments the passing of the to revive the spark of life with his excellent book. There are few first edition flaws, though the curse of abbreviations (STS for serologic test for syphilis; PTR for prothrombin time response) recurs throughout the book. Somewhat confusing is the change from old nomenclature of bacteria to new, then back to old. If Pseudomonas aeruginosa is to be Bacillus pyocyaneus, then Donovan bodies should not be Klebsiella granulomatis. The book has excellent illustrations in the section on mycology, and the charts of causes of certain conditions found by laboratory tests are helpful.

Although the author basks in the title of professor of medicine, he is still clinical pathologist enough to include chapters on clinical pathology in surgery and also in obstetrics. An excellent appendix by Dr. A. E. Moon on laboratory aids rounds out this useful and altogether outstanding work.

[9]Helpful Hints to the Diabetic

William S. Collens, B. S., M. D., Chief of the Diabetic Clinic, Chief of the Clinic for Peripheral Vascular Diseases, Associate Attending Physician, Maimonides Hospital; Attending Physician, Metabolic Diseases, Jewish Sanitarium and Hospital for Chronic Diseases, Brooklyn, N. Y.; Consultant in Metabolic Diseases, Rockaway Beach Hospital, New York City; and Louis C. Boas, A. B., M. D., Chief of the Diabetic Clinic, Associate Visiting Physician, Greenpoint Hospital; Associate Physician, Metabolic Diseases, Jewish Sanitarium and Hospital for Chronic Diseases, Brooklyn, N. Y. Cloth, 135 pages. $3. Springfield, Ill., Charles C. Thomas, 1949.

The purpose of this monograph is to equip the patient with practical information which will result in intelligent cooperation with the physician. Simple terms are used. "The forest of misinformation to which he is continuously exposed by quacks, pseudo-scientific newspaper articles and well meaning neighbors" is blazed so that the diabetic patient will be greatly benefited by close study of this book.

The diet lists are adequate, helpful, and essentially self explanatory as to food substitutions. The chapter on fraudulent information is particularly impressive and important, as the cycle of quackery and self medication has again descended upon us.

Diabetic urine tests are explicitly covered and the reviewer is pleased to see the Clinitest included in its simplicity.

Chapter VIII excellently summarizes the main questions of diabetics. The one question most often asked by all patients in any age group: "May the use of insulin ever be discontinued once one starts to use it?" is adequately answered in sincerity: "Insulin is not a habit forming drug."

The book is printed in Janson type face, which provides good visuality. The monograph is recommended as a text for the individual patient and his doctor for a full realization of what the disease means to that patient.

[10]1949 Year Book of Obstetrics and Gynecology

J. P. Greenhill, B. S., M. D., F.A.C.S., Editor. Cloth, 629 pages. $4.50. Chicago, Year Book Publishers, 1949.

The obstetrician and gynecologist looks forward each year to receiving this splendid "pocket size" volume, and the 1949 edition is not disappointing. It would seem that the book for 1949 contains more illustrations than usual, including complete operative techniques in some instances. The summaries are well prepared and, although brief and easily read, contain sufficient of the substance of the original article to make reference to it unnecessary in most cases. The remarks of the editors are, as usual, pertinent, and the reader

[7]*Herman C. Sebested, M. D., Fort Worth.*
[8]*J. J. Andujar, M. D., Fort Worth.*
[9]*Frederic B. Faust, M. D., Littlefield.*
[10]*S. Foster Moore, Jr., M. D., San Antonio.*

might wish there were more. For the busy general practitioner and specialist alike this publication is of inestimable value since it covers almost all of the important obstetric and gynecologic literature which was published during 1949.

[11]The Principles and Practice of Rectal Surgery

William B. Gabriel, M. S. (Lon.), F.R.C.S. (Eng.). Fourth edition. Cloth, 508 pages. $14.50. Springfield, Charles C. Thomas, 1948.

Anything that comes from the pen of Mr. Gabriel is worthy of reading. The resources of St. Mark's Hospital are at his disposal and he has made excellent use of them. Mr. Gabriel is not only a great surgeon, but a splendid teacher. He is able to impart his personality and teaching to his book.

There are 278 illustrations and 11 colored plates. Primarily the book is, as before, a practical treatment with emphasis on examination, diagnosis, and therapy. Anal incontinence, rectal carcinoma, and carcinoma of the anus receive special emphasis. Anal and rectal injuries are thoroughly covered.

A chapter by Mr. O. V. Lloyd-Davis, "The Surgical Anatomy of the Rectum and Anal Canal," is well illustrated and thoroughly described.

As a concise textbook on rectal surgery it is worthy of a place in the library of any physician, surgeon, or proctologist.

[12]1949 Year Book of General Surgery

Evarts A. Graham, A. B., M. D., Professor of Surgery, Washington University School of Medicine; Surgeon-in-Chief, Barnes Hospital and Children's Hospital, St. Louis, Editor. Cloth, 707 pages. $4.75. Chicago, Year Book Publishers, 1949.

This volume contains many papers on various aspects of surgery. The text is preceded by a splendid introduction by Evarts Graham. The literature reflects the fact that more radical procedures are being carried out. Chemotherapy and the antibiotics are being more judiciously employed further to reduce mortality and morbidity. Physiology in surgery continues to be stressed. The book is well published and edited; it should be in all collections on the subject.

[13]Handbook of Medical Management

Milton Chatton, A. B., M. D.; Sheldon Margen, A. B., M. D.; and Henry D. Brainerd, A. B., M. D. Paper, 476 pages. $3. Palo Alto, Calif., University Medical Publishers, 1949.

Among the avalanche of books poured down on the medical profession, it is unusual to find one which is small (pocket size), reasonable in price, and useful. The "Handbook of Medical Management" seems to meet these qualifications. In format, it is similar to the familiar "Physician's Handbook." Generally accepted forms of therapy for commonly seen conditions, as well as for some of the more unusual ones, are described. The book makes no attempt to compete with the larger, more comprehensive texts, but offers in a small, compact volume the salient information necessary for the treatment of most medical problems. The brief section on acid-base balance is good and condenses the facts into a usable outline.

A few words on the emergency treatment of acute eye conditions would have been helpful.

[14]The 1949 Year Book of the Eye, Ear, Nose and Throat

Derrick Vail, M. D., D. Oph. (Oxon.), F.A.C.S.; Samuel J. Crowe, M. D.; and Elmer W. Hagens, M. D., Editors. Cloth, 580 pages. $5. Chicago, Year Book Publishers, 1949.

The 1949 edition of the "Year Book" appears with a new co-editor in ophthalmology, Dr. Derrick Vail, who replaces the deceased Dr. Louis Bothman. Dr. Vail in ophthalmology joins Dr. Samuel Crowe in ear, nose, and throat in presenting to the profession a short abstract of the outstanding articles on eye, ear, nose, and throat from world literature of the preceding year. Therefore, this edition has been and continues to be a valuable adjunct to the armamentarium of the busy practitioner, and of any one or all of the specialists.

[11]*Hugh Beaton. M. D., F.I.C.S., Fort Worth.*
[12]*Samuel P. Todaro, M. D., Austin.*

[13]*E. Grey Dimond, M. D., Austin.*
[14]*A. E. Jackson, M. D., Fort Worth.*

ORGANIZATION SECTION

AMERICAN MEDICAL ASSOCIATION

Annual Session Program in JAMA

Details of the American Medical Association annual session, which will be held in San Francisco from June 26 through 30, have not been released as the JOURNAL goes to press. Information about advance registration and hotel reservations was printed in the April issue, page 271, and the complete program will appear in the May 20 issue of *The Journal of the American Medical Association.* Texas physicians who plan to attend the San Francisco session are referred to the A.M.A. publication for advance details.

COUNTY SOCIETIES

Bastrop County Society

February 20, 1950

Seven members of Bastrop County Medical Society discussed what could be done to promote better health in the county at their meeting February 20 in Bastrop. Joe V. Fleming, Elgin, president, presided.

One particular phase of the problem of better health, food handling, was given attention; various aspects of the physical examination for food handlers was discussed. The society suggested that the examination include a yearly chest x-ray and that the mobile chest x-ray unit from the State Department of Health be obtained for this purpose; the society also suggested that an attempt be made to bring the unit to each community during the public school session to carry out a school health program at the same time.

Other recommendations of the society for the food handler's examination were a blood test for syphilis, a stool examination, and a physical examination every six months.

A business meeting was held and William Marshall, Smithville, gave a paper on the clotting of blood. F. J. Kroulik, Smithville, was nominated to honorary membership.

Officers for 1950 are Dr. Fleming, president; W. E. Wood, Elgin, vice-president; and Walter S. Moore, Elgin, secretary-treasurer.

Bexar County Society

March 2, 1950

(Reported by J. J. Hinchey, Secretary)

Breast Cancer, Problem of Early Diagnosis (colored motion picture with sound)—Dudley Jackson, Sr., San Antonio.
Discussion—D. A. Todd, Milton Davis, Alvin O. Severance, and Albert W. Hartman, San Antonio.

The above program was presented when the Bexar County Medical Society and executive board met March 2 in San Antonio. Rowan E. Fisher, San Antonio, was section chairman for the evening.

Charles W. Johnson, San Antonio, was accepted as a member by transfer from Kerr-Kendall-Gillespie-Bandera Counties Medical Society. The society agreed to the request for professional listing of doctors in the army telephone directory.

March 16, 1950

(Reported by J. J. Hinchey, Secretary)

Preoperative Medication—George Paschal, San Antonio.
Use of Intravenous Procaine for Relief of Pain—John W. Winter, San Antonio.
Discussion—Col. Fred C. Dye, Brooke General Hospital, San Antonio.

At the March 16 meeting in San Antonio of Bexar County Medical Society the program outlined above was given. Paul L. Gorsuch, San Antonio, was elected to membership and the resignation of Robert C. Carnahan, Little Rock, Ark., was read and accepted.

The society went on record as approving the National Arthritis and Rheumatism Foundation. Carl Bosshardt, San Antonio, was selected to represent the society at the March 20 civic meeting for discussion of the Independent School Board election.

Brazoria County Society

March 30, 1950

(Reported by W. T. Galloway, Secretary)

Socialized Medicine—Everett Lewis, Houston.
Medical Legislation—Denton Kerr, Houston.

Members of the Brazoria County Medical Society and Auxiliary met in Angleton on March 30. After hearing Drs. Lewis and Kerr speak, the auxiliary held a separate meeting.

During the society meeting Ralph E. Gray, Lake Jackson, reported that the committee on indigent care would meet with County Judge T. M. Gupton, the Commissioners' Court, and hospital representatives. A letter was read from the citizens of Brazoria concerning the need for a physician in the community.

R. M. McCrary, Freeport, president, appointed the following to a committee as advisors for the poliomyelitis foundation: John S. Caldwell, Jr., West Columbia, chairman; J. S. Montgomery, Angleton; G. J. Haynes, Alvin; and H. K. May, Lake Jackson.

The county health officer, Harold W. Mann, requested that physicians furnish the county health unit with a stool and blood specimen of all poliomyelitis patients, if possible.

James Stewart, Freeport, moved and M. Warren Hardwick, Angleton, seconded that the society obtain literature on socialized medicine appropriate to distribute to patients and private enterprises. The motion carried.

Brazos-Robertson Counties Society

February 21, 1950

Fifteen members of Brazos-Robertson Counties Medical Society met in Hearne on February 21, with A. G. McGill, Jr., Bryan, president, presiding. Two medical movies were shown by Dr. R. M. Searcy, Bryan.

Dallas County Society

March 21, 1950

(Reported by W. W. Fowler, Secretary)

Urinary Tract Infections—Edward N. Cook, Mayo Clinic, Rochester, Minn.
Hoover Commission Report—Mr. Morris I. Jaffe, Dallas.

Dallas County Medical Society met with the Baylor Hospital staff March 21 in Dallas after a dinner. Elliot Mendenhall, president, was in charge of the meeting. Jack Kerr, program chairman, introduced a new feature of the program, five minutes of medical economic news by Mr. Millard J. Heath, executive secretary of the society.

Ten new members were elected upon application. Resolutions on the deaths of Drs. J. M. Dowis and Harold M. Doolittle, both of Dallas, were adopted.

George Jones moved that the executive council be authorized through the proper channels to write Texas representatives in Congress endorsing the principles of the Hoover Commission recommendations for reducing the expenses of the federal government. The motion was seconded and carried.

Galveston County Society

April 4, 1950

Some Aspects of Socialized Medicine—Warren Cole, Chicago.

At the April 4 meeting in Galveston 104 members and guests of the Galveston County Medical Society were present.

The guest speaker was Dr. Cole, professor of surgery, University of Illinois, who spoke on the topic given above. Other guests were Mr. D. C. Leavell, president of the Galveston Chamber of Commerce and editor-in-chief of the Galveston Daily News; Mr. C. E. McClelland, managing editor of the News; D. B. Calvin, Dean of Curricular Activities of the University of Texas Medical Branch; and Miss Mildred Robertson, Executive Secretary, Alumni Association of the Medical Branch.

Herman Weinert, president, opened the meeting by introducing the guests. Robert M. Moore, Galveston, introduced Dr. Cole, who as a medical member of a committee to study socialized medicine was sent by the State Department to England in 1948.

A. E. Hansen read a resolution on the death of Dr. W. Boyd Reading, Galveston.

Hale-Floyd-Briscoe-Swisher Counties Society

March 21, 1950

(Reported by Marvin C. Schlecte, Secretary)

Hospital Malnutrition (motion picture)—Courtesy of E. R. Squibb and Sons.

The regular monthly meeting of Hale-Floyd-Briscoe-Swisher Counties Medical Society was held March 21 in Plainview. J. Harvey Hansen, Plainview, reported on the recent tumor clinic sponsored in Galveston by the University of Texas Medical Branch, surveying the program and stressing important new advancements which have been made in roentgen and radium therapy concerning bladder tumors.

The motion picture named above concerned protein needs and metabolism.

Charles A. Pigford, Lockney, informed the society that the necessary quota of members had been reached for organizing a Blue Cross unit. W. H. Teague, Plainview, and E. W. Smith, Hale Center, were accepted as members by transfer.

Walter Stapp, Hale Center, was elected to the vice-presidency, Carl C. Jackson, Plainview, having succeeded to the presidency. The society voted not to hold an April meeting in order to support the meeting of the Third District Medical Society, which is being held in Amarillo during that month.

Medina-Uvalde-Maverick-Val Verde-Edwards-Real-Kinney-Terrell-Zavala Counties Society

March 10, 1950

(Reported by J. D. Stepan, Secretary)

Members of Medina-Uvalde-Maverick-Val Verde-Edwards-Real-Kinney-Terrell-Zavala Counties Medical Society met March 10 in Eagle Pass. Guest speakers included James Hendrick, E. R. Crews, and James W. Carter, Jr., San Antonio, and Ernest G. Guy, Baltimore. The meeting was concluded at a dinner attended by members of the society, their guests, and members of the Woman's Auxiliary.

Officers of the society are as follows: J. D. Williamson, Castroville, president; O. A. Fly, Jr., Uvalde, vice-president; J. D. Stepan, Crystal City, secretary; L. M. Cartall, Del Rio, delegate; Henry Hyslop, Del Rio, alternate; and Cary A. Poindexter, Crystal City, censor.

Potter County Society

February 13, 1950

Observations in Practical Obstetrical Procedure—J. H. Robberson, Amarillo.
Poliomyelitis—John R. Connell, Denver.
Discussion—J. R. Lemmon, Amarillo.

At the February 13 meeting in Amarillo of Potter County Medical Society the program outlined above was presented. Twenty-seven members and several visitors attended.

Upon motion by J. H. Robberson the society voted to contribute a page to La Arosa, Amarillo High School annual, for 1950. The president, George Waddill, reminded members that narcotic prescriptions should not be given over the telephone except in emergency and in such event the prescription should be signed within twenty-four hours after the prescription is called.

T. P. Churchill discussed a few difficulties which were being encountered by the blood bank.

April 10, 1950

Potter County Medical Society met in regular session April 10 in Amarillo. A representative of the Medical Protective Association of Dallas spoke on "Ways and Means of Protecting Ourselves from Medical Legal Suits," and R. L. Sanders, Memphis, Tenn., also spoke. A discussion of the paper on medical problems was held.

Randall-Deaf Smith-Parmer-Castro-Oldham Counties Society

April 5, 1950

(Reported by R. A. Neblett, Secretary)

The regular meeting of Randall-Deaf Smith-Parmer-Castro-Oldham Counties Medical Society was held April 5 in Hereford. Allen Stewart, Councilor of the Third District, was in charge of the meeting, which was attended by twelve physicians.

Taylor-Jones Counties Society

F. J. L. Blasingame, Wharton, trustee of the American Medical Association and the State Medical Association, spoke at the March meeting in Abilene of Taylor-Jones Counties Medical Society.

Tarrant County Society

March 21, 1950

(Reported by W. P. Higgins, Jr., Secretary)

Amebic Hepatitis and Abscess—Harold B. Griffin, Fort Worth.
Idiopathic Vertigo—Diagnosis and Treatment—J. W. Eschenbrenner, Fort Worth.
Socialized Medicine—Mr. Philip Overton and Mr. Ed Syers, Austin.

Ninety-four members and seven visitors attended the meeting of Tarrant County Medical Society held in Fort Worth on March 21.

Mary Booth was elected to membership. Tribute was paid to Mrs. Johnnie E. Monaghan, mother of Johnnie E. Monaghan, Jr., who died March 7, 1950.

M. C. McCarroll, reporting for the legislative and public relations committee, moved that the society send a letter to Wingate Lucas, Texas Congressional representative, expressing the society's appreciation for his stand on the bills which have been before the national legislative bodies. The motion was seconded and carried.

The program outlined above was given.

April 4, 1950

(Reported by W. P. Higgins, Jr., Secretary)

Tumor Clinic—Conducted by W. S. Lorimer, Jr., and John L. Wallace, Jr., Fort Worth.
Cutaneous Manifestations of Systemic Disease—Robert R. Kierland, the Mayo Clinic, Rochester, Minn.

The regular meeting of Tarrant County Medical Society was held April 4 in Fort Worth with eighty-three members and four visitors present. The program was given as listed above.

Robert D. Bickel, chairman of the cancer committee, announced that the next meeting date of the Southwest Regional Cancer Conference would be November 15, 1950, and that a tumor clinic would be held November 14.

May Owen asked members to support the cancer fund drive during April. W. B. West asked the members to report any possible charity operative cases for the television program to be held during the Association's next annual session.

Tribute was paid to Dr. W. C. Foster, who died March 13. Kent V. Kibbie was nominated for honorary membership in the Association.

April 18, 1950

(Reported by W. P. Higgins, Jr., Secretary)

Recent Advances in Treatment of Skin Diseases—J. Franklin Campbell, Fort Worth.
Ringworm of Scalp—Thomas L. Shields, Fort Worth.

Tarrant County Medical Society met in Fort Worth on April 18. Sixty-six members and six visitors attended.

The program outlined above was discussed by Wm. E. Flood, J. W. Short, I. P. Barrett, W. V. Bradshaw, Jr., W. F. Armstrong, and C. Keith Barnes, Fort Worth.

Hal D. Broadhead, Fort Worth, was elected to membership. After a letter was read from the Fort Worth District Dental Society the society voted to recommend that fluorine in the amount of 1.0 to 1.5 parts per million be added to the city's water supply.

Tom Green-Eight County Society

April 3, 1950

(Reported by P. J. C. Byars, Jr., Secretary)

Common Fractures Seen by General Practitioner—Scott H. Martin, San Angelo.
Discussion—Lacey Smith, San Angelo, and W. J. Swann, Sterling City.

The regular meeting of Tom Green-Eight County Medical Society held in San Angelo in April 3 was attended by thirty-one members.

Dr. Martin's discussion, the topic of which is stated above, included fractures of the upper and lower extremities, the anatomy and pathology of the fractures, and method of reduction and treatment of choice for each type of fracture. Discussion of the paper was centered around the treatment of supercondylar fractures of the humerus.

After the proposed amendments to the constitution and by-laws were read, Dr. Swann moved and W. B. Butner seconded that the changes be adopted as read. The motion carried.

Lewis O. Woodward, San Angelo, was accepted to membership. The society decided to defer action in regard to a

cancer detection clinic for San Angelo, and voted to take no action as regards the institution of a practical nurses' registry in San Angelo. The society also voted not to take action on the request from the Texas Association of Blood Banks for endorsement.

K. B. Round reported for the committee on additional hospital beds in San Angelo. He stated that the plans which have been drawn and approved for the addition to St. John's Hospital were in Austin for approval by the federal government for its part in the proposed construction. Dr. Round urged members who had pledged funds for the addition to make their contributions.

W. D. Anderson stated that the tuberculosis committee was asking for a tuberculosis diagnostic clinic to be carried out again this year. His motion that the society invite the State Department of Health to make a mass survey again was seconded by J. M. Rape and carried.

C. A. Kunath, president, appointed a committee on indigent medical care as follows: R. R. Jones, Chairman, R. E. Johnson, and Lacey Smith.

R. E. Windham discussed his function as chairman of the local and district committee on cancer education and appointed seven members to give radio addresses in regard to public education in cancer during April.

A letter from the state Secretary concerning a program of public relations as set up by the Alameda County (California) Society was read and referred to the public relations committee.

Victoria-Calhoun-Goliad Counties Society

February 17, 1950

The Victoria-Calhoun-Goliad Counties Medical Society met in Victoria on February 17, with Heaton Smith in charge of the program. Speakers were J. W. Kopecky and J. W. Nixon, both of San Antonio. Dr. Kopecky's topic was in the field of heart disease and Dr. Nixon's in the field of surgery.

Wharton-Jackson-Matagorda-Fort Bend Counties Society

Cancer and Cancer Research—C. C. Shullenberger, J. Allen Chamberlain, William O. Russell, and Miss Eleanor McDonald, Houston.

Staff members of the M. D. Anderson Hospital for Cancer Research, Houston, were in charge of the program at the February dinner meeting held in Richmond of Wharton-Jackson-Matagorda-Fort Bend Counties Medical Society. The speakers and subject of their discussion are given above.

After the dinner and program members of the Auxiliary inspected the Polly Ryon Memorial Hospital and held a separate meeting while the doctors held a business session.

DISTRICT SOCIETIES

Eleventh District Society

March 9, 1950

(Reported by John M. Travis, Secretary)

Backache—Milton Freiberg, Tyler.
Side Reactions of Antibiotics—Griff T. Ross, Mount Enterprise.
Reorganization of Tubercular Hospitals—J. E. Dailey, Houston.
Symposium: Intestinal Obstruction.
Diagnosis—John B. Burrows, Houston.
Surgical Treatment—L. L. D. Tuttle, Houston.
Postoperative Complications—Ward Evans, Houston.

At the spring meeting of the Eleventh District Medical Society held in Crockett on March 9, the program outlined above was presented. A noon luncheon was held with the Auxiliary. At the fall meeting to be held in Tyler officers and directors will be elected.

AUXILIARY SECTION

NATIONAL AUXILIARY TO MEET

The twenty-seventh annual meeting of the Woman's Auxiliary to the American Medical Association will be held in conjunction with the A.M.A. annual session in San Francisco, June 26-30. Headquarters for the Auxiliary will be at the Hotel Fairmont.

The tentative program calls for registration and committee meetings on Sunday, June 25; a meeting of the Board of Directors and a tea honoring the President and President-Elect on June 26; the opening meeting of the House of Delegates and a luncheon honoring past presidents on June 27; a meeting of the House of Delegates and the annual luncheon on June 28; and the postconvention meeting of the Board of Directors and the annual dinner on June 29.

Officials of the Auxiliary have requested that hotel reservations be made as soon as possible through Dr. William H. Rustad, Chairman of the American Medical Association Hotel Committee, Room 200, 61 Grove Street, San Francisco 2. Complete information as to time of arrival and departure, type of accommodations desired, five choices of hotel, and names of all persons who will occupy the rooms should be included, together with a deposit of $5 per person or $10 per room.

Mrs. George Turner, El Paso, treasurer and member of the Committee on Finance, and Mrs. Scott C. Applewhite, San Antonio, member of the Board of Directors and chairman of the Committee on Finance, will be two Texans taking leadership in the national meeting.

Officers of the Woman's Auxiliary to the State Medical Association of Texas: President, Mrs. William M. Gambrell, Austin; President-Elect, Mrs. O. W. Robinson, Paris; First Vice-President (Organization), Mrs. J. H. McCracken, Dallas; Second Vice-President (Physical Examinations), Mrs. Allen T. Stewart, Lubbock; Third Vice-President (Today's Health), Mrs. Joe T. Nichols, Atlanta; Fourth Vice-President (Program), Mrs. Carlos Hamilton, Houston; Recording Secretary, Mrs. E. W. Coyle, San Antonio; Treasurer, Mrs. John D. Gleckler, Denison; Corresponding Secretary, Mrs. William P. Morgan, Austin; Publicity Secretary, Mrs. R. T. Wilson, Austin; Parliamentarian, Mrs. Robert F. Thompson, El Paso.

AUXILIARY NEWS

Bell County Auxiliary

Mrs. Joseph B. Foster, Houston, President of the Woman's Auxiliary to the State Medical Association, and Mrs. Paul Brindley, Galveston, first vice-president, were guests of honor when Bell County Auxiliary met April 14 in Temple. Mrs. Foster spoke of trends in legislation of importance to medicine and health, stressing the Auxiliary theme for the year, "Individual Responsibility." Mrs. Brindley reported the organization of nine new county auxiliaries in the state and explained the project "Healthy Living in Our County," which Galveston County Auxiliary and other auxiliaries are carrying on.

Four new members and three guests were introduced by Mrs. J. H. Greenwood. Refreshments were served by Mesdames A. E. Moon, H. B. Anderson, G. V. Brindley, Sr., Greenwood, V. M. Longmire, A. M. McCulloh, E. D. McKay, M. W. Sherwood, L. R. Talley, and T. K. Young, all of Temple.

Brazoria County Auxiliary

The Brazoria County Auxiliary met in Angleton on March 30 as dinner guests of the Medical Society. After dinner, Dr. Denton Kerr, Houston, addressed the joint meeting and a short business meeting was held.—Mrs. R. M. McCary, Corresponding Secretary.

Cherokee County Auxiliary

Physicians of Cherokee County were guests at a Doctor's Day banquet held by the Cherokee County Auxiliary in Jacksonville on February 28. The Rev. Joe Z. Tower, Longview, district superintendent of the Methodist Church, was the principal speaker, using as his subject, "Peculiar Ethics of Doctors." Humorous readings by Charles Lane and vocal selections by Mrs. J. R. Weatherby, both of the Lon Morris College staff, Jacksonville, completed the entertainment. Mrs. C. L. Jackson, Rusk, president of the auxiliary, gave the address of welcome, and Dr. J. C. Boyd, Jacksonville, president of the Cherokee County Medical Society, made the response. Dr. L. L. Travis, Jacksonville, gave the invocation. About seventy-five persons were present.

Dallas County Auxiliary

A luncheon and style show was held by Dallas County Auxiliary in Dallas early in March. Hostesses for the occasions were Mesdames Sidney Baird, Maurice Scurry, J. W. Duckett, Charles Martin, U. P. Hackney, and O. M. Marchman, Jr. The executive board met with Mrs. Baird prior to the luncheon.—Mrs. M. P. Knight.

Galveston County Auxiliary

Officers for the coming year were elected by Galveston County Auxiliary at its March 14 meeting in Galveston at which Mrs. Joseph B. Foster, Houston, President of the Woman's Auxiliary to the State Medical Association, was guest of honor. Mrs. John Campbell reviewed the book "The Adventuress" by Marjorie Worthington.

Mrs. Foster spoke briefly at the coffee meeting, reporting on activities of the State Auxiliary. She was introduced by Mrs. Arild E. Hansen.

The Galveston County Auxiliary will be served by Mrs. John Middleton as president, with Mesdames Charles Robert Allen as president-elect; E. Ivan Bruce, vice-president; J. L. Jinkins, Jr., recording secretary; Edward Futch III, corresponding secretary; and Harrison Rigdon, treasurer.

Mrs. W. F. Spiller and Mrs. George T. Lee were in charge of arrangements, assisted by Mesdames G. W. N. Eggers, James Hejtmancik, and Futch. Mrs. Paul Brindley presided at the coffee service.

Grayson County Auxiliary

An open meeting featuring talks by Drs. Stephen Weisz, Dallas, and James Benton, Fort Worth, was held March 23 in Sherman by the Grayson County Auxiliary. Dr. Emmett Essin presided and introduced the speakers.

Potter County Auxiliary

Forty-two members of the Woman's Auxiliary to Potter County Medical Society enjoyed a luncheon recently at the home of Mrs. A. J. Streit, Amarillo. Assistant hostesses were Mesdames W. R. Klingensmith, Howard Puckett, David Patton, L. K. Patton, A. E. Winsett, Jere B. Johnson, and Howard Reid.

Mr. Wes Izzard talked about his trip to Europe and the effects of socialism there. Mrs. Merrill Winsett, president, had charge of the business meeting.

Smith County Auxiliary

A buffet dinner at the home of Dr. and Mrs. C. C. McDonald, Tyler, was held by Smith County Auxiliary in April to entertain physicians of the county. Approximately eighty guests were received by Mrs. Glynne Brown, president of the auxiliary, and Dr. and Mrs. McDonald. Co-hostesses with Mrs. McDonald were Mesdames Lex Neill and J. J. Faust. Mesdames Ben Wilson, Brown, Thomas Jarmon, Irving Pope, L. B. Windham, E. W. Clawater, and C. E. Willingham assisted in the dining room, and Mrs. Albert Woldert presided at the guest book.

Flower arrangements made by the Arrangers Study Club decorated the rooms. The dining table was centered by Marconi daisies surrounding a sculptured caduceus.—Mrs. C. E. Willingham.

Tom Green-Eight County Auxiliary

Twenty-two members and three guests were present for the April 4 meeting of Tom Green-Eight County Auxiliary held in the home of Mrs. W. L. Porter, San Angelo. Miss Aileen Trimble spoke on Hawaii.

Officers for the coming year were installed at the meeting, and Mrs. L. R. Hershberger, incoming president, named the following committee chairmen: Mesdames Roy Moon, program; George Nesrstra, project; W. B. Butner, organization; Joe Cornelison, social; Lacey Smith, membership; J. W. Singleton, state exhibit; A. Landy "Today's Health"; and W. Grady Mitchell, welfare.

Hostesses assisting Mrs. Porter were Mesdames R. B. Boyd, Merrill Everhart, C. T. Womack, and J. M. Rape.

Victoria-Calhoun-Goliad Counties Auxiliary

An Auxiliary to the Victoria-Calhoun-Goliad Counties Medical Society was organized in Victoria on April 12. The following officers were elected: Mesdames Allan Shields, Victoria, president; T. O. Melcher, Port Lavaca, vice-president; J. W. Paul, Victoria, corresponding secretary; A. S. Tomb, Victoria, recording secretary and treasurer; and L. E. Silverthorn, Victoria, parliamentarian.—Mrs. A. S. Tomb.

DEATHS

J. R. BOST

Dr. James Robert Bost, Houston, Texas, died March 16, 1950, in Rochester, Minn., of coronary insufficiency with cardiac failure.

Dr. Bost was born August 18, 1882, in Newton, N. C., the son of Edward Ramseur and Martha Ann (Estes) Bost. Receiving his preliminary education in a private high school and Catawba College, Salisbury, N. C., he was graduated May 31, 1911, from Kentucky University Medical Department, Louisville. He served an internship at Louisville, Ky. From 1914 to 1917 he practiced in Cashion and Coyle, Okla. For two years during World War I he served overseas in the

An obituary ordinarily will not be published more than four months after date of death. Cooperation in reporting deaths of physicians and in furnishing appropriate biographical material promptly is solicited.

United States Medical Reserve Corps, being one of the first "flight surgeons" and serving with Air Corps units in England as well as consultant for the Royal Air Force. From 1919 to 1921 he took orthopedic training at the hospital maintained by the New York Society for the Relief of the Ruptured and Crippled, New York, and from 1921 to 1922 he practiced in Louisville. Dr. Bost moved in 1922 to Houston, where he practiced until his death.

Throughout his professional career in Texas Dr. Bost was a member of the American Medical Association and the State Medical Association through Harris County Medical Society. He was a fellow of the American College of Surgeons and a member of the Clinical Orthopaedic Society, the American Academy of Orthopaedic Surgeons, and the Texas Orthopedic Society. Co-organizer of Jefferson Davis Hospital at old Camp Logan, Houston, he was chief of its orthopedic staff from its organization until he was 65, when he became chief emeritus. He was also co-organizer of the Shrine Crippled Children's Hospital, where he performed orthopedic surgery for the first ten years of its existence. Formerly he was also a member of the staffs of Memorial Hospital, the Houston Tuberculosis Hospital, and Faith Home. A Methodist, he was a member of the Masonic Order and the Arabia Temple Shrine. One of his chief interests was the Gonzales Warm Springs Foundation, of which he was a director. For a number of years he was team surgeon for the Houston Buffalos and the St. Louis Cardinals. Dr. Bost was a member of the Houston Club and an expert amateur photographer.

Dr. Bost on December 24, 1929, in New York married Miss Helen Lenore Shawver, who survives. Other survivors are a sister, Mrs. Ruth Lanier, Detroit; and a brother, Joseph Edward Bost, Greer, S. C.

J. M. DOWIS

Dr. Joseph Marion Dowis, Grapevine, Texas, died in a Dallas hospital February 10, 1950, of a heart attack.

Dr. Dowis was born August 24, 1901, in McGregor, Texas. He received his early education in the public schools of Wichita Falls and Austin and for two years attended the University of Texas, Austin. In May, 1926, he was graduated from the University of Texas School of Medicine, Galveston. After completing a rotating internship at Harris Clinic Hospital, Fort Worth, in June, 1927, Dr. Dowis began his practice in San Benito, moving to Dallas in 1930. In Dallas he was for a time in 1941 acting director of the City Health Department and was also supervisor of the emergency hospital for the department, quarantine physician, assistant health officer, and epidemiologist. In 1946 Dr. Dowis joined the staff of Parkland Hospital; at the time of his death he was director of the outpatient clinic there. He taught preventive medicine at Southwestern Medical College, Dallas.

Dr. Dowis was a member of the American Medical Association and the State Medical Association through Dallas County Medical Society. A Mason, he was a member of the Episcopal Church.

Surviving Dr. Dowis are his wife, a son, J. M. Dowis, Grapevine, and a daughter, Miss Jeaneane Dowis, New York.

H. M. DOOLITTLE

Dr. Harold M. Doolittle, Dallas, Texas, died in Dallas on February 22, 1950, after a brief illness.

Dr. Doolittle was born in Elyria, Ohio, on August 27, 1877. He received a bachelor's degree from Oberlin College, Oberlin, Ohio, and was graduated from the University of Michigan Department of Medicine and Surgery, Ann Arbor, Mich., in 1902. Dr. Doolittle served an internship at Northern Pacific Railroad Hospital, Brainerd, Minn., and was one of the first fellows in surgery at the Mayo Clinic, Rochester, Minn., from 1904 to 1905. Moving to Dallas in 1905, he was in private practice until in 1915 he became associated with the late Dr. R. W. Baird; this association in 1922 developed into the Dallas Medical and Surgical Clinic.

Dr. Doolittle was a member of the State Medical Association and the American Medical Association through Dallas County Medical Society. He was secretary of the Section on Gynecology and Obstetrics in 1909. A fellow of the American College of Surgeons, he was an organizer and past president of the Texas Surgical Society. During World War I he was chief examiner for the draft board at Camp Dick, located then at Fair Park. Dr. Doolittle was a professor at Baylor University College of Medicine from 1906 until it was moved to Houston in 1943 and was emeritus professor of clinical surgery at Southwestern Medical School, Dallas. Dr. Doolittle was a member of the Episcopal Church.

Dr. Doolittle is survived by his wife, the former Miss Leda Stimson, whom he married in 1907; a son, Wilcox S. Doolittle; a daughter, Mrs. William H. Potts; and three grandchildren, all of Dallas.

G. W. GREER

Dr. Guy Winfred Greer, Whitesboro, Texas, died February 11, 1950, in a Sherman hospital of a heart attack.

Born in West, Miss., on November 13, 1881, the son of Mr. and Mrs. George T. Greer, Dr. Greer received his early education in the public schools of that state. He attended the old Fort Worth Medical College, Fort Worth, and in 1911 was graduated from Memphis Hospital Medical College, Memphis. He began his practice in Delaware Bend, and practiced in Gordonville and Dexter before moving in 1919 to Whitesboro. With the exception of two years in Miami, Texas, Dr. Greer practiced in Whitesboro until his death.

Dr. Greer was a member of the State Medical Association and the American Medical Association through Cooke County, Grayson County, Gray-Wheeler-Hansford-Hemphill-Lipscomb-Roberts-Ochiltree-Hutchinson-Carson Counties, and Grayson County Medical Society successively. In 1941 he served as president of Grayson County Medical Society. He was a member of the Fourteenth District Medical Society. Dr. Greer owned the Greer Clinic and Hospital, Whitesboro, since its establishment in 1943. He was a member of the Masonic Lodge and a former city alderman.

On October 3, 1920, Dr. Greer married Miss Grace McCusker in Denison. She survives him as do a daughter, Miss Mary Ann Greer, Whitesboro; a son, James W. Greer, Austin; a brother, Clyde Greer, Fort Worth; a sister, Mrs. H. G. Ball, Tioga; and two grandchildren.

T. M. HALL

Dr. Talbert Marion Hall, Gatesville, Texas, died in a Gatesville hospital on January 14, 1950, of cerebral hemorrhage and diabetes mellitus.

Dr. Hall was born in Coryell County on October 24, 1885, the son of G. A. and Frances Hall. Receiving his early education in the public schools and North Texas State Normal College, Denton, he was graduated from the University of Texas School of Medicine, Galveston, in 1910. In 1917 he was among seventeen physicians who were awarded scholarships at the University of Texas School of Medicine; he did postgraduate work at Tulane University of Louisiana, New Orleans, in 1924 and at the University of Texas in 1940.

After an internship in Coryell County Memorial Hos-

pital, Gatesville, Dr. Hall practiced in Jonesboro, Chalk Mountain, and Osage before moving in 1923 to Gatesville, where he practiced until 1950. His specialty was the eye, ear, nose, and throat.

Throughout his professional life in Texas Dr. Hall was a member of the American Medical Association and the State Medical Association through Coryell County Medical Society, serving as president of the society in 1944. He was a member of the Twelfth District Medical Society. During World War I Dr. Hall served as first lieutenant in the Army Medical Corps. He was a member of Phi Beta Pi medical fraternity and was chairman of the Democratic party in his county. A Baptist, Dr. Hall was a Shriner and a Mason. For thirteen years he was physician for the State Training School for Boys, Gatesville; he was also local surgeon for the Cotton Belt Route. Dr. Hall was listed in Who's Who Among American Physicians in 1936.

In 1910 in Turnersville Dr. Hall married Miss Frances Viola Faris, who survives. Also surviving are two daughters, Miss Louise Hall, Gatesville, and Mrs. Marjorie Hall Eberhart, San Antonio; two brothers, H. T. Hall, Crawford, and Tilman Hall, Gatesville; and two sisters, Mrs. C. W. Knight, Waco, and Mrs. J. E. Nelson, Brenham.

F. R. TUCKER

Dr. Felix R. Tucker, Nacogdoches, Texas, died in Nacogdoches on February 19, 1950, of pneumonia.

The son of Dr. Francis H. and Elizabeth (Roberts) Tucker, Dr. Tucker was born August 28, 1871, in San Augustine, Texas. He received his preliminary education in the public schools and was graduated in 1892 from the Medical Department of Tulane University of Louisiana, New Orleans. He returned each year for seven years to Tulane University, later doing postgraduate work at the University of Texas, Galveston, and in Baltimore and New York. From 1892 to 1900 Dr. Tucker practiced in San Augustine; he moved to Nacogdoches in 1900, where he practiced until his enforced retirement in 1948. Dr. Tucker's professional interests were in surgery, public health, and internal medicine; after 1928 he devoted his practice to the latter two fields. He was one of the first to report human hookworm infection and to direct efforts toward its control. In eleven years as city health officer Dr. Tucker was responsible for the formulation and adoption of a sanitary code which was widely recommended by the State Department of Health.

Dr. Tucker was a member of the American Medical Association and the State Medical Association through Nacogdoches County Medical Society, being elected to honorary membership in May, 1949. He was a member of the American Public Health Association and of the Texas Public Health Association, which he served as president in 1935. Dr. Tucker served the Chamber of Commerce as a member of committees on highways, public health, and agriculture. He was an honorary director of the Texas Safety Council. Active in the Democratic party, Dr. Tucker was memorialized by the Texas House of Representatives in its special session in 1950. He was a member of the Episcopal Church.

On June 15, 1893, Dr. Tucker married Miss Mary Sublett, who survives. Other survivors are three sons, Dr. Henry Tucker, Dr. Stephen B. Tucker, and Hal B. Tucker, Nacogdoches; a daughter, Mrs. W. L. Ballard, Dallas; and two brothers, Frank W. Tucker, Nacogdoches, and Ben Tucker, Houston.

D. A. MEIER

Dr. Duane A. Meier, Houston, Texas, died April 10, 1950, in a Houston hospital of cerebral hemorrhage.

Born March 26, 1918, in Lincoln, Neb., the son of Dr. Louis F. and Mary Hazel (Dickson) Meier, Dr. Meier was educated in Lincoln High School. He was awarded a bachelor of arts degree in 1939 and a bachelor of science degree in 1940 from the University of Nebraska, Lincoln. In 1942 he was graduated from the University of Nebraska College of Medicine, Omaha. He served an internship at Jefferson Davis Hospital from July 1942 to July 1943, a residency in orthopedics at Hermann Hospital from July 1946 to July 1947, and a residency in orthopedics at Methodist Hospital from July 1947 to July 1948 and again from January 1949 to July 1949; all hospitals named are in Houston. Dr. Meier was a staff member of Hermann Hospital at his death. Orthopedic surgery was his specialty.

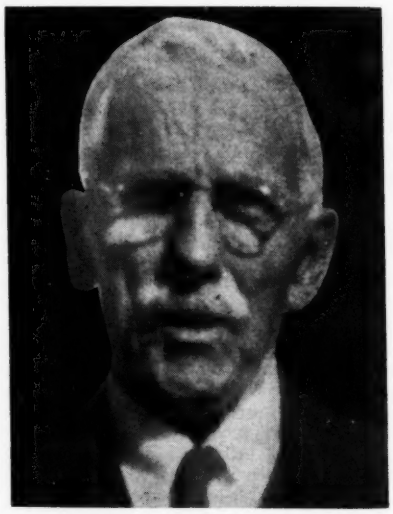
Dr. Meier served in the United States Navy Medical Corps from July 1943 to April 1946. He was a member of Phi Rho Sigma medical fraternity, Acacia fraternity, a Methodist, and a Mason.

On June 13, 1945, in Houston Dr. Meier married Miss Anna Munger, who survives. Other survivors are a daughter, Pamela Ann Meier, Houston, and his parents, Dr. and Mrs. Louis F. Meier, Lincoln.

A. B. McPHERSON

Dr. A. B. McPherson, Lovelace, Texas, died in Hillsboro on March 13, 1950, from generalized arteriosclerosis.

Dr. McPherson was born April 30, 1861, in Indiana, the son of Mr. and Mrs. James McPherson. Educated in the public schools, he taught in the high schools of Missouri for seven years before beginning the study of medicine. He was awarded a degree April 25, 1892, from Marion-Sims College of Medicine, St. Louis. After beginning his medical career in Annutt, Mo., where he remained for one year, he moved



DR. A. B. MCPHERSON

to Durango, Texas, practicing there eight years. For one year he practiced in Abilene, then moved to Lovelace, where he remained until his retirement in 1943.

A member of the State Medical Association and the American Medical Association through Hill County Medical Society, Dr. McPherson served as president of the society in 1932. He was elected to honorary membership in the State Medical Association in 1940. Dr. McPherson was a twelfth degree Mason.

In 1892 in Annutt Dr. McPherson married Miss Lydia E. Alley, who preceded him in death in February, 1943. He is

survived by three sons, Dr. Garland McPherson, Lovelace, Orvis McPherson, Itasca, and Marvin McPherson, Fort Worth; and one grandchild.

C. M. SIMPSON

Dr. Charles Moffett Simpson, Temple, Texas, died in a Temple hospital March 30, 1950, of a heart attack.

The son of Dr. and Mrs. C. W. Simpson, Dr. Simpson was born March 6, 1895, in Waxahachie. He received a bachelor of arts degree from Trinity University, Waxahachie, in 1914 and a master of arts degree from Harvard University, Cambridge, Mass., in 1915. In 1919 he was graduated from Harvard Medical School, Boston. Dr. Simpson served a surgical internship and residencies in surgery and urology at Massachusetts General Hospital, Boston. After practicing several months in Dallas, he went in 1923 to Temple, where he began his long association with Scott and White Hospital, specializing in surgery. At his death he was one of the senior surgeons there. He was also a urologist at the Gulf, Colorado, and Santa Fe Hospital, Temple.

Dr. Simpson throughout his medical career in Texas was a member of the State Medical Association and the American Medical Association through Dallas County and Bell

DR. CHARLES M. SIMPSON

County medical societies. In 1936 he served as president and in 1934 and 1935 as secretary of Bell County Medical Society. He was immediate past-president of the Texas Urological Society. A fellow of the American College of Surgeons, Dr. Simpson was a member of the American Urological Association and the Texas Surgical Society. While he was in medical school Dr. Simpson was a member of the Reserve Officers Training Corps. He was a member of the Harvard Club in Boston.

Dr. Simpson married Miss Gladys Dixon in Boston; she preceded him in death April 21, 1948. Surviving Dr. Simpson are his son, Charles W. Simpson, Galveston; his daughter, Mrs. C. J. Colgan, Great Neck, Long Island, N. Y.; his mother, Mrs. C. W. Simpson, Dallas; and one grandson.

J. E. LUDEAU

Dr. Jules Ernest Ludeau, Houston, Texas, died in Houston on March 30, 1950.

Born in Ville Platte, La., in 1870, Dr. Ludeau was the son of Jules and Emma (Couleau) Ludeau. He received his preliminary education in the public schools and St. Charles College, Grand Coteau, La., and was graduated in 1892 from the University of Louisville Medical Department, Louisville. Later from 1904 to 1905 he did postgraduate work in New York. Dr. Ludeau began his practice in Marksville, La., in 1892, and was located in Centerville, Ville Platte, and Crowley, La., before his postgraduate study in New York. He returned to Fort Smith, Ark., where he remained for twelve years. In 1918 he moved to Houston, where he practiced until his retirement.

Dr. Ludeau was a member of the State Medical Association and the American Medical Association through Harris County Medical Society. He was a member of the fraternal order of Elks and a Catholic.

In Chicago in 1904 Dr. Ludeau married Miss Minnie Edith Schlouch, who died January 16, 1942. Surviving him are two daughters, Mrs. Claudia Loegue, Pasadena, and Mrs. Bernice Merrill, Houston; three brothers, Regile Ludeau, Gilbert Ludeau, and Emile Ludeau; three sisters, Mrs. Lee Wiggins, Mrs. Nestor Terrodin, and Mrs. Ferdinand DeRouen, all of Louisiana; and six grandchildren.

A. A. SMITH

Dr. Albert Alexander Smith, Talco, Texas, died March 31, 1950, of complications from a blood block.

Dr. Smith was born the son of Alexander and Sarah Frances (Collier) Smith, in West Point, Fayette County, Texas, on December 2, 1868. He received his early education in the public schools of Georgetown and was graduated in 1905 from the Southwestern University Medical College, Dallas. He later did postgraduate work at the Baylor Uni-

DR. ALBERT A. SMITH

versity College of Medicine, Dallas; St. Louis University Medical Department, St. Louis; and Central University of Kentucky, Louisville. His specialty was obstetrics and pediatrics. Dr. Smith began his practice in 1893 in Goolesboro, now Talco. After practicing in Ardmore, Indian Territory, for three years, Dr. Smith returned to Goolesboro, where he practiced from 1900 until 1950.

Dr. Smith was a member throughout his professional life in Texas of the American Medical Association and the State Medical Association through Titus County Medical Society.

He served from 1934 to 1935 and in 1938 as president of the society.

Director of the Talco Chamber of Commerce, Dr. Smith also served as counselor for the East Texas Chamber of Commerce. He helped to organize the Talco State Bank, being its vice-president and director at his death. He was a Master Mason and a charter member of the Talco Masonic Lodge, also a member of the Baptist Church.

On February 15, 1894, in Talco, Dr. Smith married Mrs. Susan Wims Welch; she died January 26, 1936. Dr. Smith is survived by three step-daughters, Mrs. Stella Dodgers, Bogata, Mrs. Madge Brown, Talco, and Mrs. G. C. Glass, Abilene; two brothers, Early J. Smith, Abilene, and Eugene F. Smith, Lubbock; a sister, Miss Beulah Smith, Talco; and twelve grandchildren.

T. E. WARD

Dr. Thomas Eugene Ward, Houston, Texas, died in a Houston hospital March 5, 1950, of coronary occlusion.

Born in Springville, Tenn., on August 20, 1897, Dr. Ward was the son of Mr. and Mrs. R. L. Ward. He attended the Graysville Academy, Graysville, Tenn., and received a bachelor of science degree in 1924 from Emanuel Missionary College, Berien Springs, Mich. In 1930 he was graduated from the College of Medical Evangelists, Loma Linda, Calif. He served an internship in the Nashville General Hospital, Nashville, Tenn., and a surgical residency in the Wabash Valley Hospital, Lafayette, Ind. In 1931 he entered private practice in Williamsport, Ind., and from 1934 to 1939 he was chief of surgery, owner, and operator of the Williamsport Hospital. He practiced in Houston from 1939 until his death specializing in general practice and surgery.

During his medical career in Texas Dr. Ward was a member of the American Medical Association and the State Medical Association through Harris County Medical Society. He served in the military forces during World War I. He was a member of the Methodist Church, Masonic Lodge, and Arabia Shrine Temple.

In Williamsport in 1938, Dr. Ward married Miss Evelyn Bartlett, who survives. Also surviving are two daughters, Beverly Ward and Karen Ward, Houston; his father, R. L. Ward, Paris, Tenn.; a brother, Harry Ward, Collegedale, Tenn.; and two sisters, Mrs. Sudie Dobson, Winston-Salem, N. C., and Mrs. Monty Charles, Marion, Ill.

W. G. STUCK

Dr. Walter Goodloe Stuck, San Antonio, Texas, died at his home March 21, 1950, of leukemia.

Born January 19, 1905, at Jonesboro, Ark., Dr. Stuck was the son of W. R. and Martha Laura (Goodloe) Stuck. In 1921 he was graduated from Jonesboro High School; he attended Hendrix College, Conway, Ark., and in 1925 was awarded a bachelor of science degree from Emory University, Atlanta. He was graduated in 1929 from the Washington University School of Medicine, St. Louis, and in 1934 was awarded a master of medical science degree in orthopedic surgery from the University of Minnesota for research work done at the Mayo Clinic.

Dr. Stuck was an intern from 1929 to 1930 in the University Hospital, Ann Arbor, and a fellow in orthopedic surgery from 1930 to 1934 at the Mayo Clinic, Rochester, Minn. Certified by the American Board of Orthopedic Surgery, he practiced orthopedic surgery in San Antonio from 1934 until his death.

A member throughout his professional life in Texas of the American Medical Association and the State Medical Association, Dr. Stuck was a member of Bexar County Medical Society. In 1947 he was chairman of the Section on Surgery, and at his death he was a member of the Committee on Library Endowment and the Committee on Television of the State Medical Association. A fellow of the American College of Surgeons, Dr. Stuck was a member of the following organizations: American Academy of Orthopaedic Surgeons, American Orthopaedic Association, Southern Medical Association, Southern Surgical Association, Southwestern Surgical Congress, Texas Orthopedic Society, and Texas Surgical Society.

Dr. Stuck was chairman of the committee on scientific investigation of the American Academy of Orthopedic Surgeons in 1949 and was secretary of the committee on fractures and traumatic surgery of the Academy. He was a councilor and former chairman of the Section of Orthopedic Surgery of the Southern Medical Association. An associate editor of the *Southern Surgeon,* Dr. Stuck was a past president of the Texas Surgical Society and the Southwestern Surgical Congress.

With Dr. C. S. Venable of San Antonio Dr. Stuck made studies of the effect of metal appliances in bone, introduced a new metal, Vitallium, into surgery, and wrote a book, "The Internal Fixation of Fractures." Dr. Stuck contributed more than seventy-five articles to leading medical journals.

DR. WALTER G. STUCK

Dr. Stuck helped organize the poliomyelitis treatment center at Robert B. Green Memorial Hospital, San Antonio, during the 1942 epidemic and served as orthopedic consultant at Gonzales Warm Springs Foundation and on various committees to combat poliomyelitis. A civilian consultant in orthopedic surgery at Brooke Army Medical Center, Fort Sam Houston, Dr. Stuck was a professor of orthopedic surgery at the Baylor Graduate School of Medicine, Brooke General Hospital, San Antonio. He was a medical adviser to the Bexar County Chapter of the American Red Cross and the Girl Scouts. A member of the Methodist Church, he belonged to the San Antonio Country Club, the San Antonio Club, and the Conopus Club.

On March 28, 1936, in Chicago, Dr. Stuck married Miss Mary Eleanor Buck, who survives. Also surviving are two daughters, Eleanor Ann Stuck and Margaret Elizabeth Stuck, San Antonio; his mother, Mrs. W. R. Stuck, Jonesboro, Ark.; a sister, Miss Florence Stuck, Jonesboro; and five brothers, Charles A. Stuck and William R. Stuck, Jonesboro; Dr. Ralph Stuck, Denver; Goodloe Stuck, Shreveport; and Dr. Paul Stuck, Wilmington, N. C.